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# THE OIL WEEKLY

## OIL & GAS ENGINEERING

News Statistics

August 14, 1931

ADVERTISERS INDEX, NEXT TO LAST PAGE

EDITORIAL INDEX, PAGE 11

*and*

*discuss*

# FASTER WELDING

"I'm trying to work out some formula for figuring on pipe line welding jobs and it seems to me that TIME should be the basic figure."

"Well, I would say that PROCESS is first because time depends on that. You see the Lincoln 'Shielded Arc' process using 'Fleetweld' electrodes and 'Stable-Arc' welders enables us to make much faster SPEED."

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# LINCOLN

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W-178

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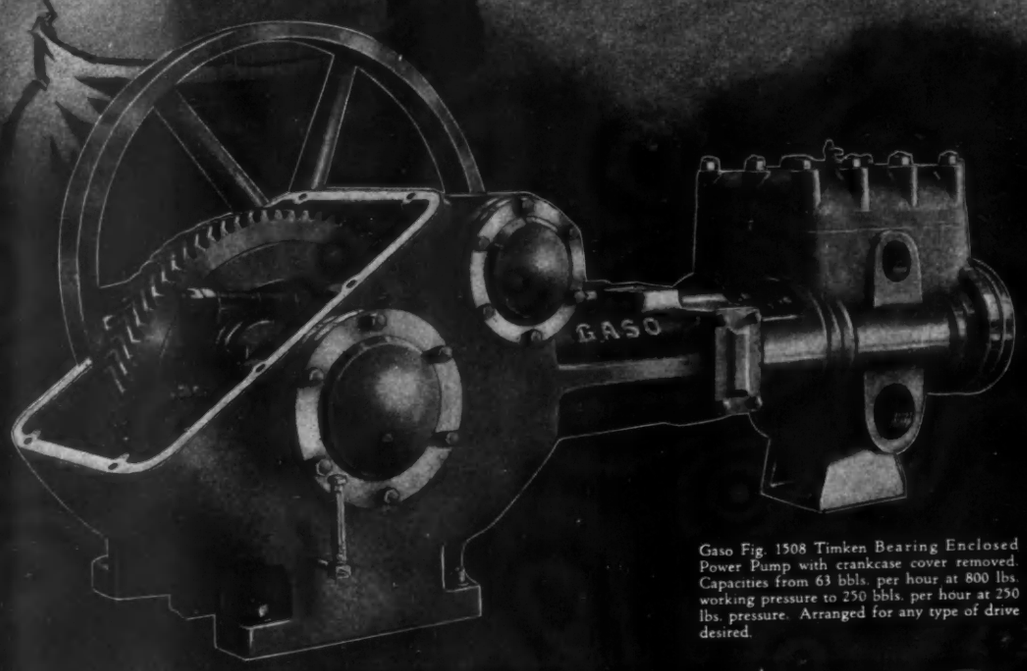


Gaso Fig. 1508 Timken Bearing Enclosed Power Pump with crankcase cover removed. Capacities from 63 bbls. per hour at 800 lbs. working pressure to 250 bbls. per hour at 250 lbs. pressure. Arranged for any type of drive desired.

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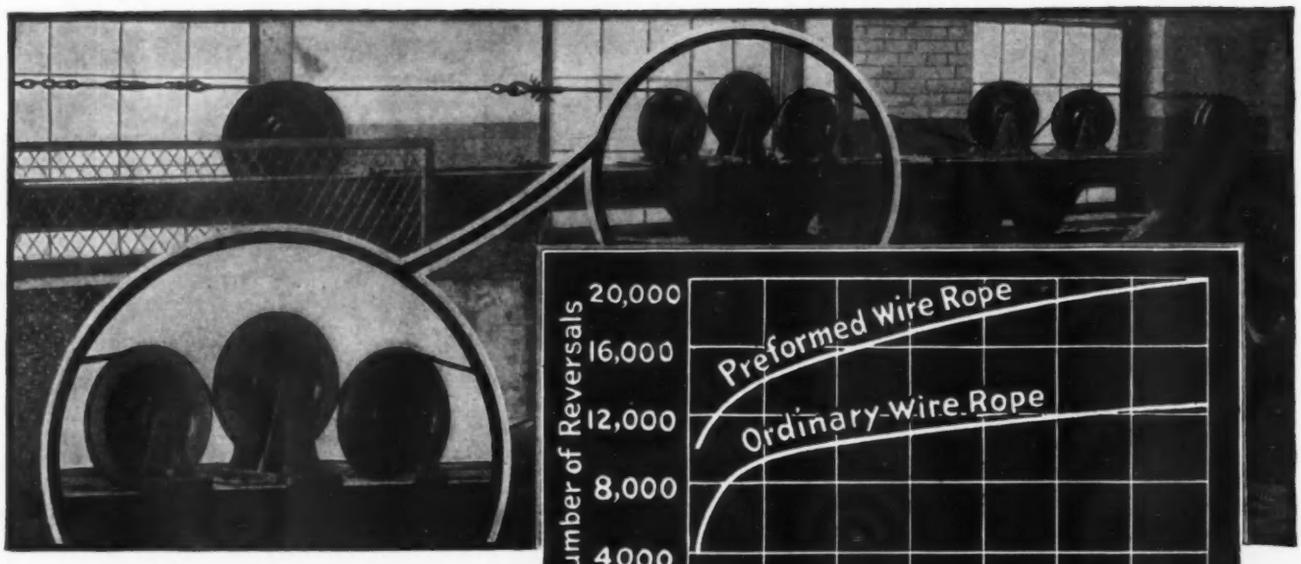
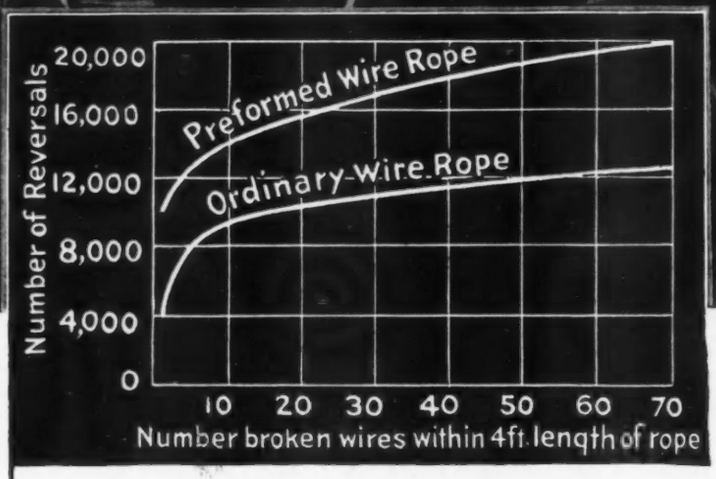


Wire ropes are oscillated back and forth over a series of sheaves, as shown above. The arrangement of the sheaves, the tension and the speed can be made to approximate actual operating conditions.

●

The chart at the right is a typical comparison between Lay-Set Preformed Wire Rope and ordinary wire rope, both cables being of the same size, material and construction.

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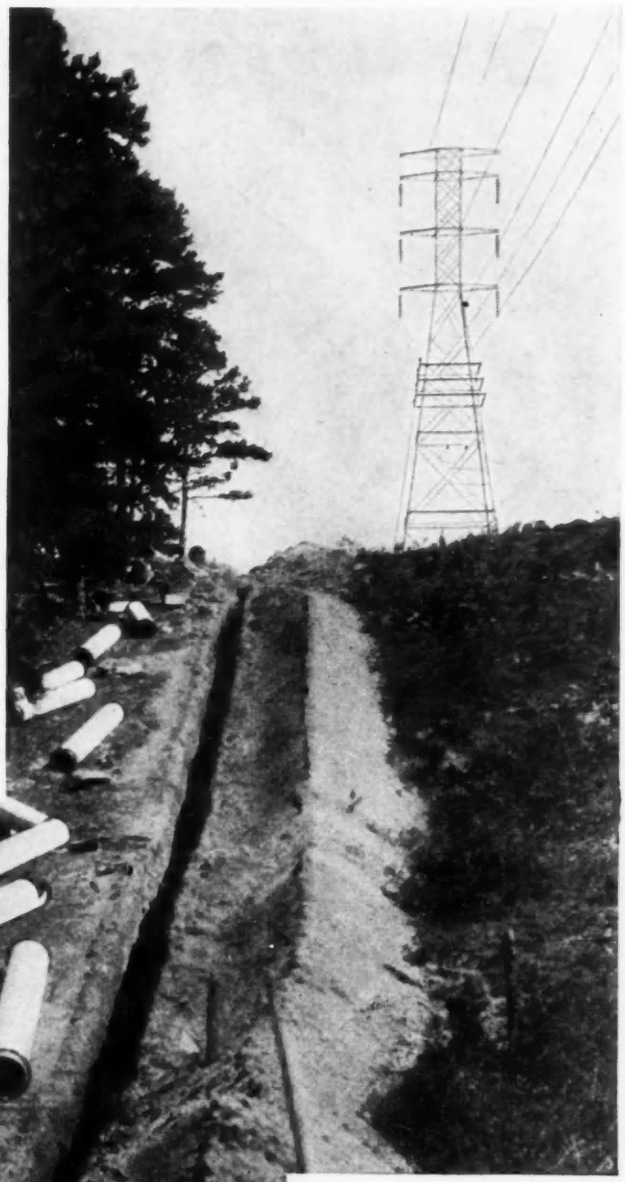

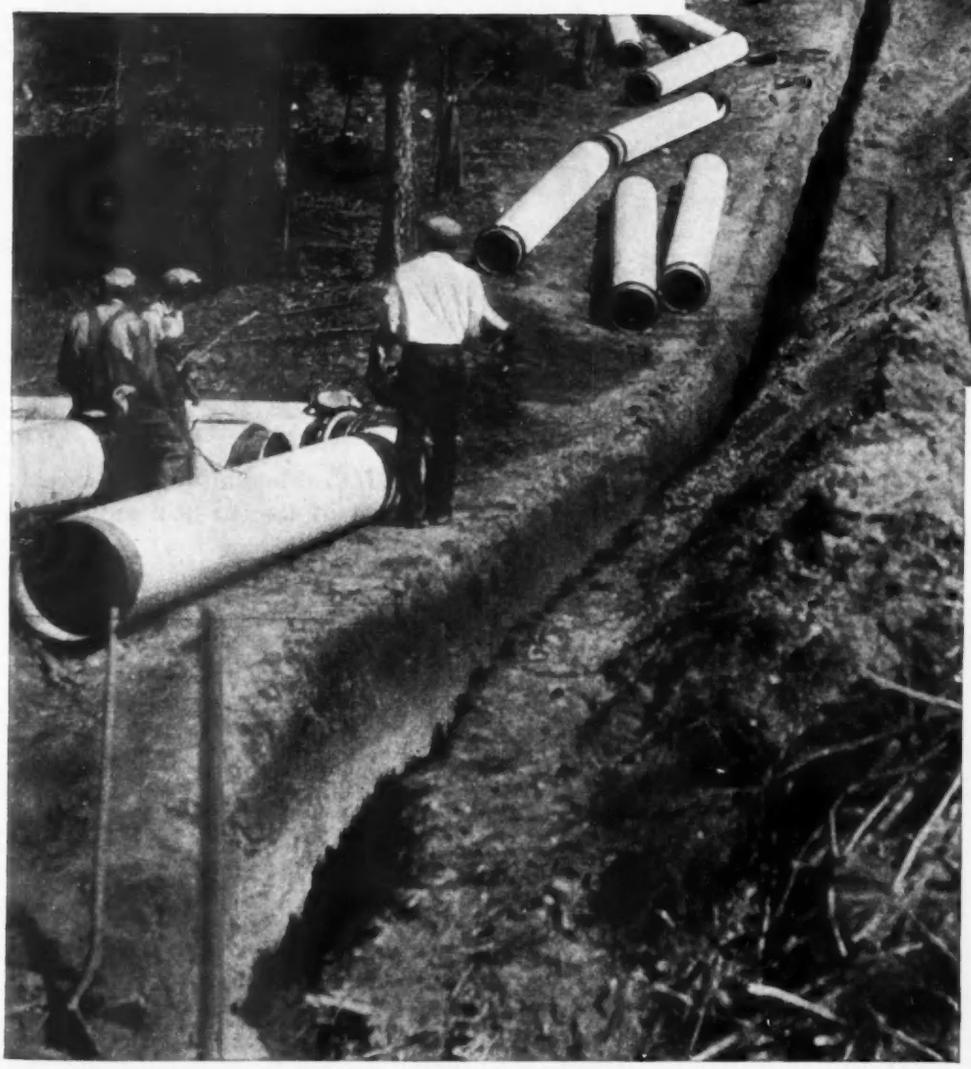

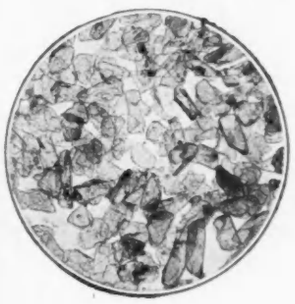

**This reproduction of a photomicrograph shows the interlocking of the flakes of the internal reinforcement used by Barrett. By laminating with the waterproofing agent they give Barrett Pipe Line Enamels unusual tensile strength and toughness.**

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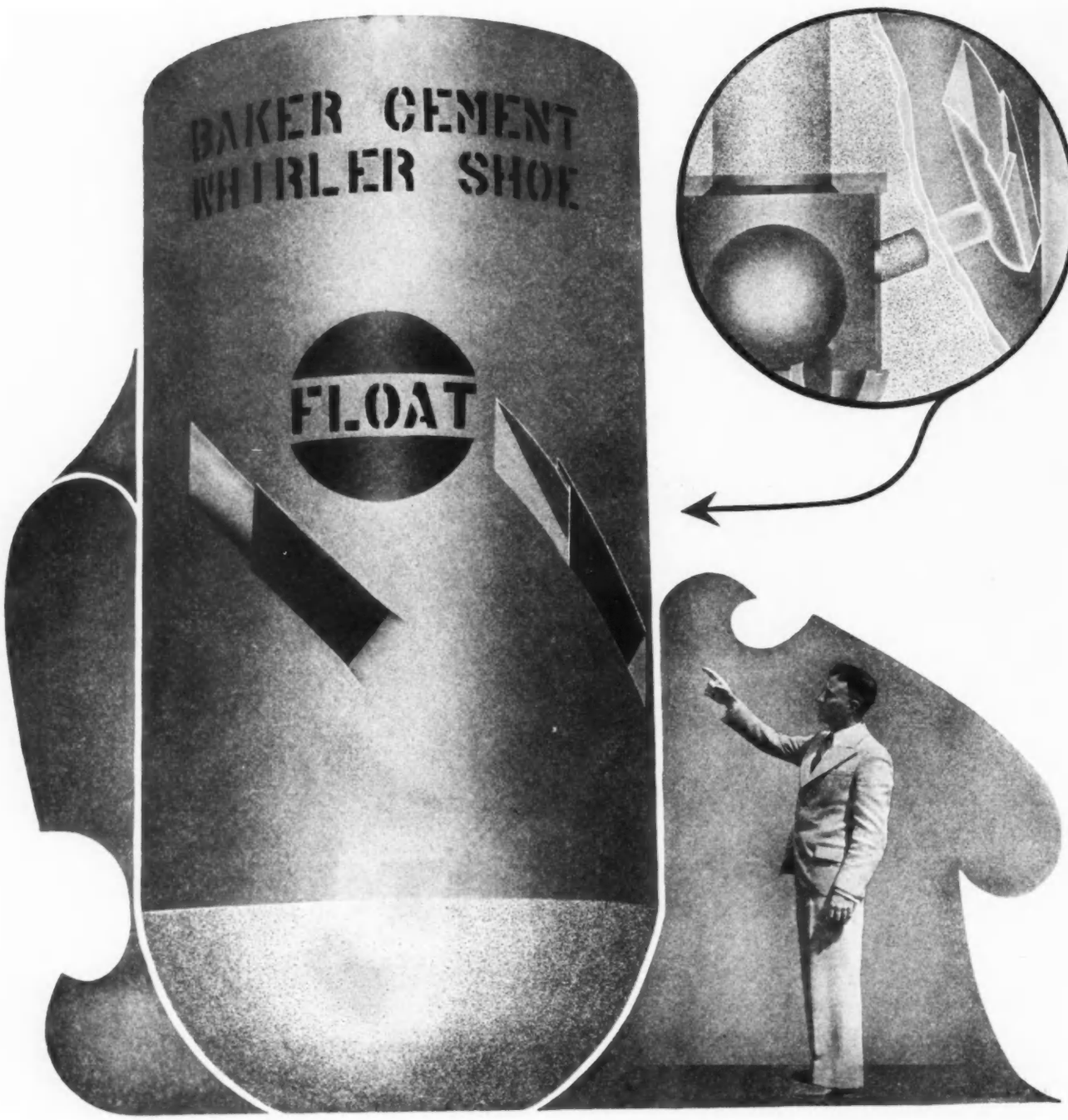


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# THE OIL WEEKLY

August 14, 1931
Vol. 62, No. 9

S. W. ROBINSON
*Editor*

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HOUSTON, TEXAS

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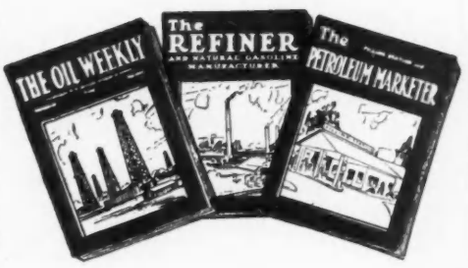


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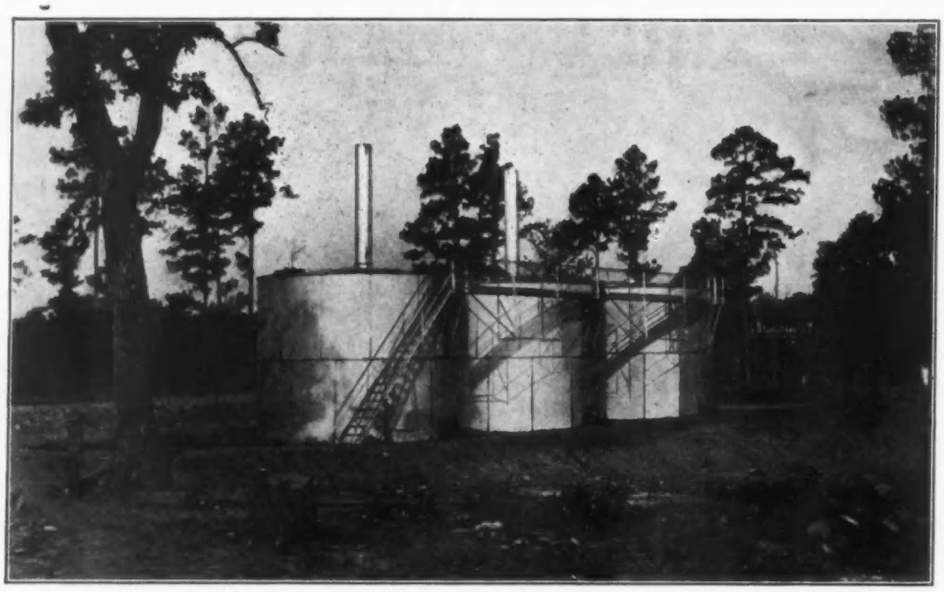

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THE OIL WEEKLY

VOLUME 62, NO. 9 AUGUST 14, 1931

# Compromise Conservation Bill Promised by Texas Solons

AUSTIN, Texas.—Proration advocates and opponents Tuesday night, August 11, had so far agreed that it appeared certain a revised Woodward-Wagstaff bill would pass both houses of the Texas legislature Wednesday. The administration bill, designated as the Woodward-Wagstaff bill previously had been rejected and a substitute passed by the senate Saturday, August 8, nullified the proration powers of the commission and proposed little if anything to strengthen existing conservation laws.

The revised bill permits the attorney general to file suit to enjoin parties from violating orders of the railroad commission in regard to physical waste, and permits the commission calling witnesses to determine whether or not physical waste is taking place in any area. All parties engaged in the production or transportation of oil are required to keep a permanent record of transactions which agents of the state may inspect at will. Violators of the law or orders under it may have their charters or permits to do business in the state revoked.

The commission shall issue rules to prevent physical waste and if it finds that waste is taking place, may reduce or adjust the production of oil or gas from a given well and/or pool as necessary to prevent waste. Such reduction or adjustment shall be made in such manner as to distribute, prorate or otherwise apportion such reduction or adjustment as the facts justify.

The commission may not restrict drilling of wildcat territory, nor restrict production of any new field until the output is above 10,000 barrels, except for prevention of waste.

The indemnity bond provision of the Wagstaff bill remains as it was, and notice and hearing are required before an injunction can be obtained against orders of the commission. The commission is not to consider market demand or attempt to control economic waste.

The revised or compromise bill was submitted by a subcommittee appointed by the free conference committee. This committee consisted of Senator Rawlings, who sponsored the substitute for the Wagstaff bill; Senator Woodward, and Representatives Wagstaff and Duvall.

The Rawlings substitute for the Wagstaff bill, which was finally passed in the senate late Saturday night, August 8, nullifies all of the proration clauses of the bill passed by the house, and does little to strengthen the present conservation laws.

This bill is a strict anti-proration measure, forbidding the commission to establish proration on any basis. The consideration of market demand and economic waste is also prohibited.

***AUSTIN, Texas. — Governor Sterling intimated late Monday, August 10, that the Texas national guard would be sent to "occupy" the four counties comprising the great East Texas oil field unless an acceptable oil conservation bill is passed. Even if a bill is passed and not by the two-thirds majority necessary that it go immediately into effect, there is a possibility that the militia will be sent into the area and martial law declared. "It may be necessary to resort to more drastic measures," the governor's statement said, "than have hitherto been used. Many citizens feel that the conservation laws are being trampled under foot and are asking the chief executive to use the militia to protect them."***

Physical waste is defined, both underground and above ground, similar to those carried in other conservation measures.

The bill states that "nothing in this act shall require ratable production of oil and gas from different wells," and says, again, "the commission shall not be authorized to require ratable or proportionate production of oil from different wells or equalized use of gas energy by different operators." This is one clause which prohibits proration. Orders of the commission must be confined to individual wells or cases of waste, instead of to pools or fields as units.

Employees of the commission must be paid from state funds. The commission, however, is empowered to fix oil-gas ratios to prevent waste of gas in the production of oil. A tax of one-tenth of a cent per barrel is provided to support the commission.

Provision is made for speeding up court procedure similar to that in the Wagstaff bill. The commission may be enjoined, or it may enjoin others to prevent physical waste, and may request a receiver for violators of orders sustained by the courts. These injunctions take precedence over other cases. Notice to the commission is required before an injunction may be granted, and hearings on temporary restraining orders must be had within five days after they are granted.

The bond indemnity proposition has been omitted. Concerning market demand, the bill says:

"The commission shall not have the power to attempt by order, or otherwise, directly or indirectly, to limit the production of oil to equal the existing market demand for oil; and

that power is expressly withheld from the commission. It is specified that nothing in this act shall modify the marginal well or common purchaser acts."

An opinion from the attorney general's department which rendered sections of the Wagstaff bill invalid, or held them unconstitutional, was partly responsible for the switch to the Rawlings measure. Fred Upchurch, assistant to the attorney general, informed Senator Purl in this opinion that the laws of Texas would not permit an order by the commission to force operators to take oil ratably from a pool, or to operate it as a unity. There is no law in the state which makes the oil in a pool the common property of the owners of the surface rights.

Efforts to have the Rawlings amendment to the Wagstaff bill engrossed by the house Monday afternoon, August 10, were a complete failure. Representative Duvall of Dallas, defender of the measure, pointed out that many features of the Wagstaff bill had been declared unconstitutional by Assistant Attorney General Fred Upchurch in an opinion rendered Senator Purl on Saturday. He also cited from the opinion that the law permitted proration to market demand, in spite of a specific statement to the contrary. By a vote of 106 to 19 the bill was sent to a free conference.

Wagstaff defended his bill and informed the house that if the Rawlings measure passes it will put a premium on high production, as the Pollard pipe line bill guarantees the operator ratable taking in proportion to his production, and therefore the largest producer will be able to move the most oil. He pointed out that the bill leaves court procedure as it is at the present time, and although it permits regulation of oil and gas ratio, the requirement that this be applied and fixed for each individual well makes it impractical to operate.

## Texas Pipe Line Bill Ready For Governor's Signature

Austin, Texas.—By a vote of 112 to 20, the House of Representatives Monday morning, August 10, concurred in the amendments of the Davis-Pollard pipe line bill, probably the strongest regulatory common purchaser measure in force in any of the oil-producing states. The bill provides for ratable takings, requires the commission to make pipe lines connect to all wells, instructs the railroad commission to fix the pipe line rates, permits the forfeiture of charters of corporations who refuse to obey commission orders, appropriates $50,000 for the enforcement of the law, and declares every operator who purchases oil, even though it be the royalty oil from the lease which he operates, to be a common purchaser.

Companies with storage for rent are declared public utilities, and prevents discrimination by the purchasers and operators of storage. They are required to file a bond, not to exceed $25,000, for the protection of the public they serve. Monthly posting of oil movement by each common carrier is required. The rules for operation of pipe lines apply to the natural gas lines as well as other pipe lines. A provision is included to prevent any ruling under this law in conflict with the anti-trust laws of the state.

It is specified that no carrier shall transport oil produced in violation of railroad commission's orders. Fixing production to the market demand is specifically prohibited. Details of each section of the act are given below.

Section 1 declares all parties owning storage for hire, a public utility.

Section 2 prevents discrimination by such public utility against its patrons, either in facilities furnished or rates charged.

Section 3 requires such public utilities to file bond, not to exceed $25,000, with the railroad commission within 30 days after the passage of this act. After hearing, the commission may change the amount of such bond, based on the quantity of business done. This bond is for the benefit of patrons of the utility, and they have the right of suit thereon.

Section 4 says that the railroad commission shall establish and enforce rules and regulations governing the character of facilities to be furnished by these utilities, set the rates and charges for storage. It provides for their inspection, grading, measurement, deductions for B. S. & W., and similar control.

Section 5 gives the public utility first lien on the commodity in its possession to secure payment of proper charges, except lien for taxes.

Section 6 requires all common carriers to post in a prominent place, before the twentieth of each month, the following information: 1. How much petroleum, crude or refined, was in the actual and immediate custody of such carrier or public utility at the beginning and close of such month, and where same was located or held, including the location and designation of each tank or place of deposit, and the name of its owner; 2, how much petroleum, crude or refined, was received by such carrier or public utility during such month; 3, how much petroleum, crude or refined, was delivered by such carrier or public utility during such month; 4, what quantity of such petroleum, crude or refined, is held by it for the account of itself or parent or affiliated organizations; 5, the available empty storage owned or controlled by it and where located; and, 6, crude and refined oil shall be named separately.

Section 6a says the commission shall establish the rates of charge for gathering, transporting, loading, delivering and storing oil in Texas. This includes both single and joint line transportation, deductions for evaporation, shrinkage, demurrage, storage and overage, and similar items. The rate basis shall be a fair return on the investment, for reasonable operating expenses, allowance for depreciation and other proper factors. A reasonable latitude is allowed for the establishment and adjustment of competitive rates. The commission shall, immediately after the passage of this act, hold a hearing and reset all rates. Upon application for change in rate, the new tariff may be placed in force at once. If the new tariff is higher and not approved, the shippers have the right to reimbursement for the extra charge made during the time the new tariff was in force. A general hearing shall be held once each year, at which time all rates shall be adjusted, and other hearings may be had from time to time on motion of the commission or any interested party. A common carrier may not abandon any of its connections without the written consent of the well owner, or the consent of the railroad commission.

Section 7 says the commission may order the common carrier to enlarge or extend its facilities, or to increase its storage if such is found to be for the public good and will not impair the ability of the utility to perform its duty to the public.

Section 8 says that everyone affiliated with a common

(*Continued on Page* 43)

# EXECUTIVE ORDER OKLAHOMA'S ORDER OF THE DAY

## *A Personal Sketch of* GOVERNOR WILLIAM H. MURRAY

*By* **GRADY TRIPLETT**

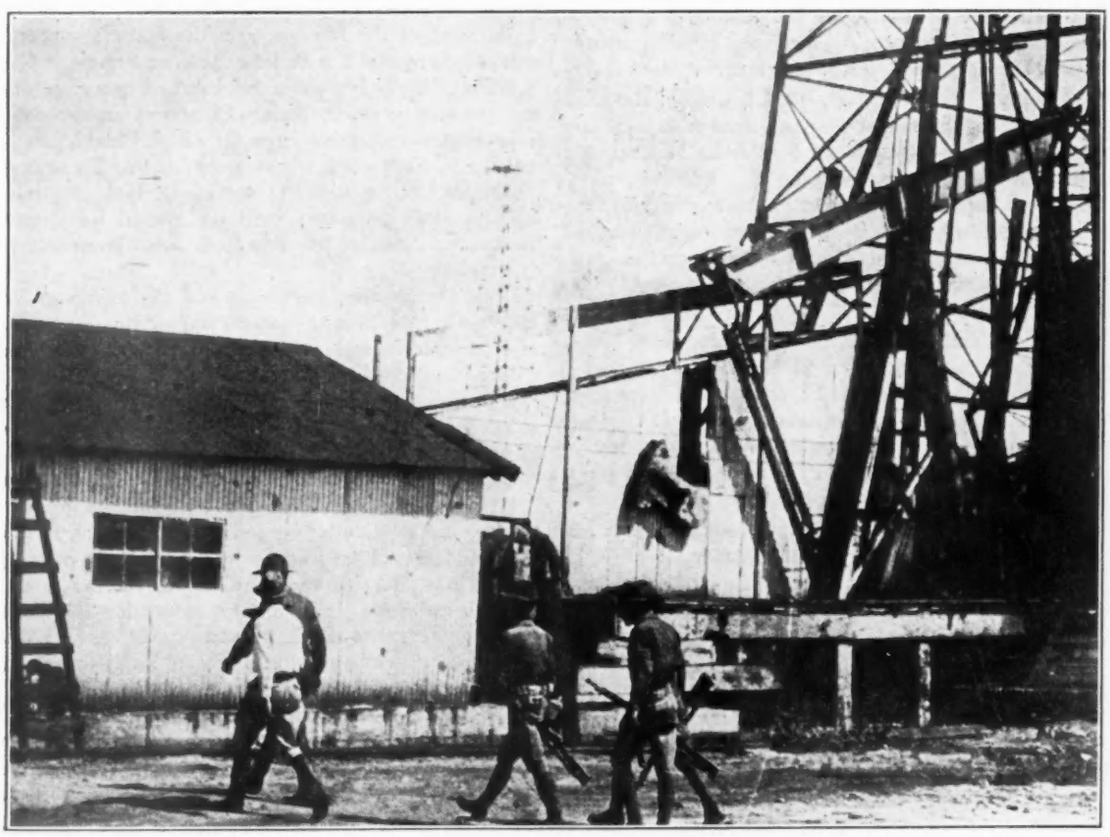
IN Oklahoma the executive order is the order of the day right now—both in so far as oil and other things are concerned. As the source of executive orders Governor William H. Murray looms lone and ranks high.

It is an executive order through which the oil wells of the flush fields of Oklahoma today are shut down. An executive order plus martial law closed a toll bridge over Red River between Durant, Oklahoma, and Denison, Texas. When a patient in the hospital connected with the state medical school demanded the services of a chiropractor, an executive order was forthcoming. Furthermore there are other executive orders ready for whatever plague may threaten the domain over which the Sage of Tishomingo reigns.

This man Murray dotes high on the constitution and the flag. Before he sallied forth to take charge of the troops at the Red River bridge he posed with the flag of the United States in one hand and that of Oklahoma in the other. There was then a federal district court injunction ordering Oklahoma militia to open the toll bridge route. But the Oklahoma governor went down and for a day kept the span closed. He ate hog jowl and cabbage while the soldiers ate fried chicken. Those not so friendly to Murray were convinced that he wanted nothing more than he wanted a citation from the federal judge who issued the restraining order.

His friends credit him with the daring of charging hell with a bucket of water. His enemies reply to the effect that in loosing the water charge he would scamper away behind the cover of the rising steam and then charge into a wild oil well with a fence rail.

William H. Murray is considered by friends, enemies and those of the middle ground as one of the profound students of constitutional law. He came out of Texas in the territorial days of Oklahoma and settled at Tishomingo and later they gave him the credit of being the sage of that town. He also carries the title of "Alfalfa Bill." He was one of the authors of the Oklahoma constitution, along with the father of Will



*Militiamen move in to uphold Governor Murray's demand for dollar oil in Oklahoma. (International picture)*

Rogers, Judge R. L. Williams, who is now a federal judge, as well as others of prominence in Oklahoma politics.

Later Murray gained a seat in Congress and today he speaks with pride of the fact that he smoked five-cent cigars in war time. He met some defeats at the hands of Oklahoma voters and in 1923 he sailed away to establish a colony in Bolivia. Many stories came back to his Oklahoma land concerning his exploits there. One was that when threatened with bandits, he wrapped his lean body in the American flag and told the bandits to fire away. That was too much for the bandits of South America.

Some two years ago, the Bolivian experiment having lost its ardor, he reappeared in Oklahoma with so few dollars that he did not have means of getting about to campaign for the post of governor. He ate crackers and cheese in the small town grocery stores and traveled in a dilapidated flivver, owned by a friend. He promised tax reduction and he won. His opponent in the run-off primary was Frank Buttram, oil producer of means.

So far tax reduction has failed to show its face in Oklahoma and there is no hope for it. There are tax increases in prospect but these are being placed upon the monopolies, utilities and pipe lines. Those who laugh at campaign promises contend that all the executive orders now coming forth are in part an effort to divert attention from the fact that those who elected Murray will continue to pay taxes as in years past.

There has been no executive order in regard to tax reduction. Neither has there been an executive order removing Lew Wentz from the Oklahoma Highway Commission. Friction between Wentz and Murray developed during the campaign. Murray made threats and Wentz was reduced from chairman to a mere member of the highway body but he is still there and he came off victor in the legislative inquiry into conduct of that organization in its purchasing of cement.

As for oil, the Oklahoma governor went into office admittedly not informed on oil. One of his early acts was the naming of a committee to investigate the petroleum industry and make recommendations for legislation. The majority report of the committee was not what Murray wanted in the way of a report.

Murray charged that the monopolies had been in control of the committee and his opposition to H. F. Sinclair became evident while the committee reports were on file. Proration continued in Oklahoma, although the report of the majority of the committee was opposed to it. Prices went down along with the growth of proration until at Oklahoma City producers elected to close in their wells rather than accept a price schedule with 22 cents as the highest price paid.

This lower price schedule brought the ultimatum from Murray to the effect that oil must bring $1 a barrel or the prorated fields would be closed. The dollar price failed to appear and the executive order did appear when promised. But it finally came from the governor's office and it is in effect today with results that can not be foretold. It is a boon in some circles and a joke in others.

So far there has been but one statement from the ranks of those who could pay a dollar a barrel for Oklahoma crude oil. It came from Mr. Sinclair and was accepted as personal rather than an answer from the purchasing companies. In his executive order directing the closing of prorated fields both Sinclair and his company were mentioned. The governor contended that Sinclair was robbing the state of needed revenue. Over in the School Land Commission, a suit was ordered to compel Sinclair Oil & Gas Company to pay royalty on a basis higher than the 20 cents per barrel prevailing when it was taking its July oil out of the Oklahoma City field. The Sinclair company holds a school land lease there.

When H. F. Sinclair answered the Oklahoma governor he has this to say about higher oil prices:

"All the proclamations and troops in the world will not add one cent to the price of oil."

Other than that there has been no public consideration given to the demand for dollar oil. Purchasers are ignoring the flush fields and buying oil where they can.

In regard to the suit to compel royalty payment at a higher schedule, Sinclair said:

"Although our company holds only an unimportant fraction of school land leases, it is the only one mentioned as being responsible for depriving the school children of the state of revenue due from these lands. No suit need be brought, because the day these royalties are due they will be paid at the highest price paid by any company, without any haggling based on the different prices that preaviled in July."

So the purchasers of oil as a body have given no heed to the executive order and its reduction of crude oil output. Neither has the governor budged. He has said that something more than dollar oil is at stake, for he contends that his action is an effort to determine whether the laws of a state can be overridden by injunctions from the courts. He expected—and it would seem that he would welcome—the move of the "monopolies" to go into some federal district court seeking an injunction to remove troops from leases.

Evidently that move will not be made. If the purchasers of oil make any effort to counteract the executive order it will be through the Supreme Court of the United States. When this court convenes in October it may have an opportunity to pass on the action of Murray as based on the Oklahoma constitution. These executive orders of Governor Murray each bow to the supremacy of the President of the United States as well as its highest judicial tribunal.

Meanwhile William H. Murray is no doubt giving ear to a bee that is buzzing to the tune of possible nomination as the democratic nominee for president of the United States. In a press conference recently Murray admitted that he had heard rumblings of such and then he laid down the conditions under which he would be president. He would want control of the department of the interior, also the matters concerning international loans and the Federal Reserve System.

While Murray is playing his hand of executive orders there is a serious question facing Oklahoma independent refiners. They have been cut off from the oil of Oklahoma's flush fields and they do not know where to go for oil. There is oil in East Texas but getting sufficient volume by tank cars is out of the question; rail congestion will not permit its shipment. Also the closing down of leases in flush fields is causing the release of employes.

With the butcher, the baker and the merchant William H. Murray is a "Moses to lead us out of the depression." Down at Okmulgee he was so designated because of his demand for dollar oil. But with refiners not provided with crude oil, Murray is another sort of leader. Refinery employes and some workers on oil leases may soon be without wages with which to buy the merchandise of those who give praise.

As matters now stand the controversy is a deadlock. Murray has troops in the oil fields and wells are off production. But he does not have dollar oil and there is nothing to indicate that such a price will be paid so long as current prices prevail in East Texas. As for the constitution, Murray is on one side with his executive orders and his contention for the rights of a state to manage its affairs without interference from the courts. On the other crude oil buyers are not ready to put out a dollar for each barrel of Oklahoma oil.

There is no one picture possible of William H. Murray. Just last week he stood at the bier of his aged father and played upon the heart strings of 3000 mourners. It was the confession of a wayward son of long ago now in confession. He said:

"When I was 12 I thought I had no need of my father.

(*Continued on page 52*)

# Sabine Uplift Important in Petroleum Development

By JACK LOGAN
*Staff Representative*

EVEN before discovery of the great East Texas field on its west flank, the Sabine Uplift was of great importance from the standpoint of petroleum production and possibilities. For on top and on the flanks of that vast mountain uplift there were already numerous oil and gas fields, most of them in Northwestern Louisiana, but several also in Eastern Texas.

Finding of the prolific and immense field of Rusk, Gregg, Smith and Upshur Counties, East Texas, however, has served to emphasize the importance of this major upthrust of the earth's crust, and in consequence of that discovery considerable exploration work has already been done on and around the uplift, while much more will no doubt result in the future.

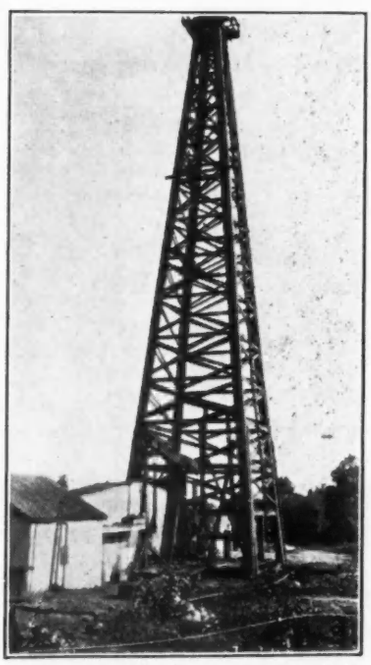
Along with a brief description and history of the Sabine Uplift data will be given herewith on the oil and gas fields lying on or flanking it, with information as to deep tests and producing formations and depths; and recent exploration work on and around the uplift will also be discussed, with particular reference to that portion lying in East Texas.

**Description of Sabine Uplift**

The Sabine Uplift may be described as a worn down and covered up mountain of large extent, the eroded mountain having been finally overlain with Upper Cretaceous and Eocene sediments to such extent that the original uplift is no longer reflected by any appreciable elevation at the surface.

The outline of the uplift is indicated on an accompanying map, by the surface contact of the Wilcox formation with the younger Carrizo sand on the Texas side and with the equivalent Cane River formation on the Louisiana side of the uplift, the latter two formations having been laid down around the outer and lower edges of the uplift, which at that time was a large island, the sea gradually withdrawing in the meantime to even lower levels around the uplift.

As outlined by the above surface contact, the Sabine Uplift is approximately 100 miles long from north to south and nearly as wide, covering over a dozen counties and parishes in Texas and Louisiana, respectively, with the axis of the uplift roughly paralleling the boundary between the two states. Towns on the flanks of the uplift include Vivian, Louisiana, on the north, Henderson, Texas, on the west, Sabinetown on the south, and Natchitoches, Louisiana, on the southeast.



*C. M. Joiner's Daisy Bradford 3, which opened East Texas development*

The upthrust of the earth's surface which caused the original formation of the Sabine Uplift is regarded as having occurred after Lower Cretaceous time, when an extensive area in Northern Louisiana and Southern Arkansas was lifted up, forming a vast structural feature, with the Monroe Uplift on the east corresponding with and paralleling the Sabine Uplift on the west. With respect to the Cretaceous rocks, therefore, the Sabine Uplift is only a part of that greater structure.

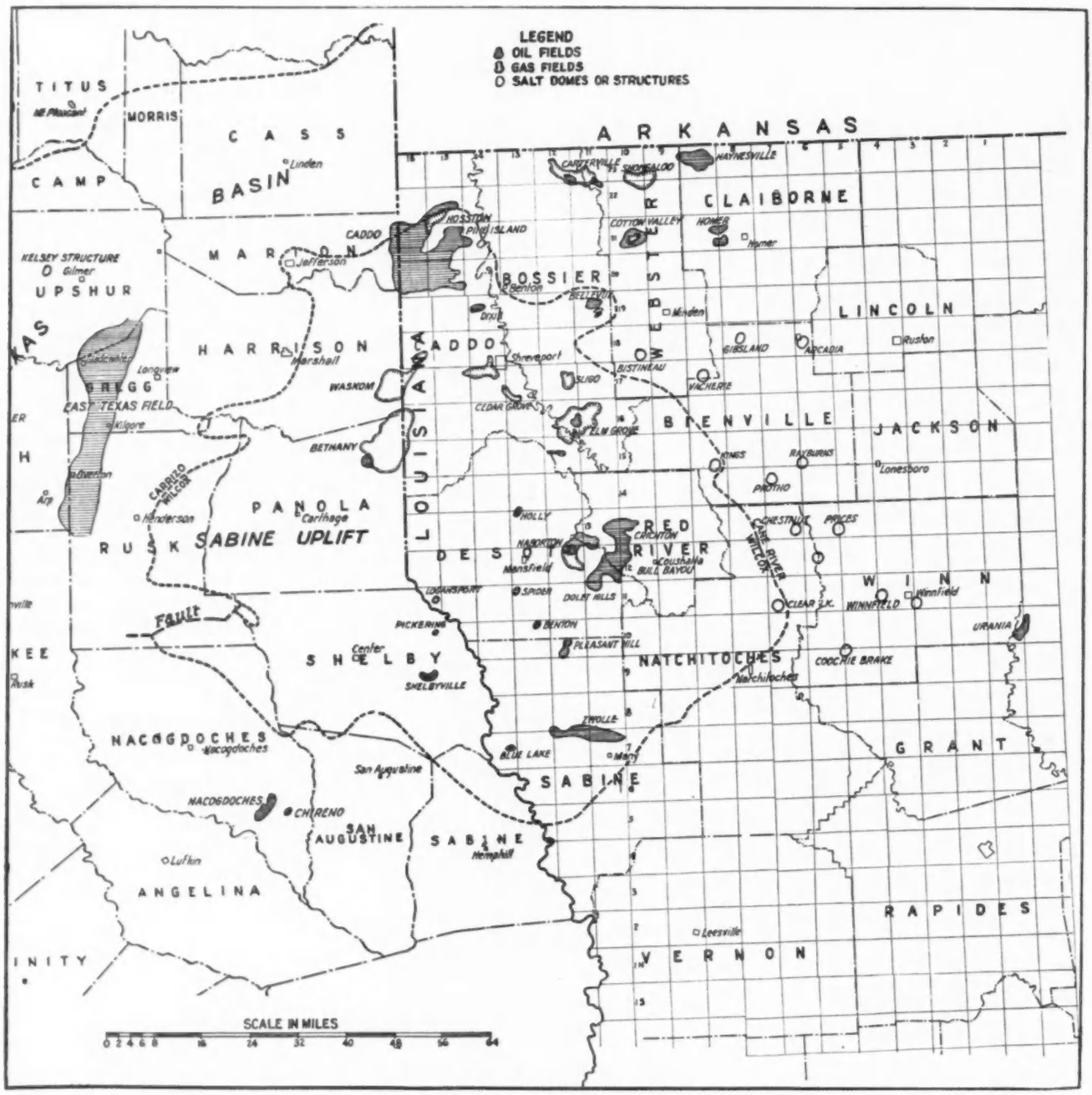
Following that first uplift the Sabine area, a mountain of Cretaceous rocks standing as an island or peninsula in an advancing sea, eroded down to a low plain, its mountain peak furnishing the sands and muds which were washed down and deposited as new formations in the East Texas Basin on the west and the corresponding basin in Louisiana on the east.

In subsequent periods, however, the Sabine region was uplifted again, upwarped, and downwarped successively; and the seas consequently advanced over it or receded to result in successive overlapping of the original Lower Cretaceous structure with Upper Cretaceous and Eocene Tertiary sediments. The Wilcox sand which now covers the Sabine Uplift is Eocene in age. To the south of the uplift and the adjacent basins there are successively younger formations coastward, laid down in the Gulf as it gradually but steadily receded southward from the Sabine area after the Wilcox sand which now covers it was laid down.

Recognition of the above geological history of the Sabine Uplift is essential for a thorough understanding of the sub-surface conditions of the present flush East Texas field; and it is likewise a requisite for logical procedure in looking for possible additional fields of a similar nature on other flanks of the uplift. Similarly, a knowledge of that geological history is necessary for thorough understanding of fields higher up on the great structure.

Since the prime interest in the Sabine Uplift at present concerns possibilities for additional Woodbine sand fields around its flanks corresponding with that of Rusk, Gregg,

## Oil and Gas Fields, Salt Domes and Structures Lying on Top and on the Flanks of the Sabine Uplift, Northwestern Louisiana and Northeastern Texas




*Sabine Uplift is covered at surface by Wilcox formation, and outline of the uplift is indicated by dashed line showing where younger formations, the Carrizo in Texas and Cane River in Louisiana, were laid down over the Wilcox around the outer, lower edges of the uplift*

Smith and Upshur Counties, Texas, on its west flank, a more detailed, although brief discussion of the laying down of the Woodbine sand will be made at this point.

After the Sabine Uplift was originally formed as a mountain of Lower Cretaceous rocks covering the wide area occupied now by both the Sabine and Monroe uplifts, its top began to erode, and in the meantime the sea began to advance upon it from the south and west, and the materials eroding from the mountain washed down to the seas and were deposited, the principal rivers flowing to the west. The first deposit to be laid down in the East Texas Basin then was the Woodbine, a coarse grained sand carried down the mountain by swift waters. As the great mountain gradually wore down, however, the rivers became less rapid, and they began to carry finer sands.

In the meantime the uplift and also the adjacent basin of East Texas were gradually sinking, and the Upper Cretaceous sea continued to advance, extending higher up the sides of the Sabine Uplift and finally spreading completely over the truncated mountain. Of course long periods were required for those changes, and meanwhile changes were occurring as to the nature of the sediments laid down. As the water arose around the uplift and became deeper in the East Texas Basin sand was being washed seaward along the dry land, while farther out in the basin, first sand, then shales and chalks were deposited. After filling in of Woodbine sand in the East Texas Basin the Eagle Ford shales and clays and Austin chalk were deposited in the deeper portions of the bay on top of the Woodbine sand, while shoreward phases of the Eagle Ford and Austin formations may have been laid down along the flanks of the Sabine Uplift as sands. The above process then continued, and next were laid down successively in East Texas the Taylor, Pecan Gap, and Navarro formations, and in Louisiana the equivalent of those formations.

The Woodbine sand, as stated, was never deposited on top of the Sabine Uplift, for the latter was dry land when the Woodbine was being laid down in the surrounding sea to the west. It was deposited principally in East Texas because the rivers flowed that way. But even in the East Texas Embayment, an arm of the Gulf of Mexico, the sand is believed to be absent south of an east-west line drawn approximately across the southern extremity of the Sabine Uplift. The highest level at which the Woodbine was deposited on the west flank of the Sabine Uplift is indicated by the eastern boundary of the big East Texas flush field, where the sand pinches out.

The nearest equivalent to the Woodbine along all flanks of the Sabine Uplift but the west is the Tokio formation. Although the exact age of the Tokio is debatable, the formation is sometimes classed as the equivalent of the Eagle Ford and part of the Austin of Texas. The Tokio extends around all the flanks of the Sabine Uplift in Louisiana and also around the northwest and southwest flanks in Texas; and it is an important source of both oil and gas in Louisiana.

The Austin chalk of Texas is sometimes considered as represented in Louisiana by the Brownstown formation, although it may be represented in part by the Tokio. The Taylor of Texas is represented in Louisiana by (possibly Brownstown) Ozan, Pecan Gap, and Marlbrook formations, naming them in order of age from older to younger. The Navarro of Texas has as Louisiana equivalents the Saratoga, Nacatoch and Arkadelphia formations.

With the mentioned exception of the Woodbine, the above named Upper Cretaceous formations are found all around and on top of the Sabine Uplift, and it is from several of them that the principal oil and gas production, associated with the Sabine Uplift, comes, the petroleum accumulation being made possible by local folding or faulting on the major uplift. In addition to the Upper Cretaceous rocks, the Glen Rose formation of the Lower Cretaceous has been found productive, particularly of gas with high gasoline content, on the upper portions of the uplift, that formation being within easy reach of the drill on locations high on the uplift by virtue of the normal upper formations of the Lower Cretaceous being absent. Those absent formations, the Washita group (in Southwest Texas comprising Buda, Del Rio and Georgetown) and the underlying or older Fredericksburg group (in Southwest Texas, Edwards lime), were laid down in the Sabine region, but they were thrust up in formation of the original Sabine Uplift, and they subsequently eroded away from the higher portions of the uplift. Aside from the production from the Glen Rose division of the Trinity group in the Lower Cretaceous, the higher portions of the Sabine Uplift also offer possibilities of oil or gas from the basement sand of the Trinity, the latter being the basal sand of the Lower Cretaceous, as the Woodbine is the basal sand of the Upper Cretaceous. Going far enough down the flanks of the uplift, of course, a complete section of Washita as well as Fredericksburg may be found.

Thicknesses of formations as found on the Sabine Uplift in the Dixie field, Caddo Parish, Louisiana, are shown by H. K. Shearer and E. B. Hutson* in a generalized stratigraphic column as follows:

| Formation | Feet |
|---|---|
| EOCENE— | |
| Pleistocene and Recent | 100 |
| Wilcox formation | 200-?00 |
| Midway formation | 300-400 |
| Unconformity | |
| UPPER CRETACEOUS— | |
| Arkadelphia formation | 150 |
| Unconformity | |
| Nacatoch formation | 150 |
| Saratoga chalk and Marlbrook formation | 240 |
| Annona chalk | 400 |
| Ozan formation | 340 |
| Unconformity | |
| Brownstone formation and Tokio formation | 435 |
| LOWER CRETACEOUS— | |
| Trinity group | 5000 plus |

In the column from which the above tabulation was taken explanation was made that the Ozan formation includes a sand member at the base known as the "Buckrange" or "Blossom." The latter is a widely used name.

Data being given in accompanying tabulations as to producing formations and producing depths of fields on and around the Sabine Uplift on both the Texas and Louisiana portions, as well as to deep tests that have been drilled within that same region, the remainder of this article will be restricted to further discussion of the Texas or western portion of the uplift, with particular emphasis on the exploration work which has been done recently or which is now under way. For it is this part of the uplift which has attracted greatest attention since discovery of the new East Texas field.

### Shelby County Prospecting

Located on the southwest portion of the Sabine Uplift, Shelby County, Texas, has been the scene of considerable exploration work during the present year, and at least one very interesting test has been drilled recently.

Sloane Prospecting Company of Houston worked 100,000 acres in Shelby and San Augustine Counties with torsion balances and in that campaign found evidence of a

*A. A. P. G. Bulletin, June, 1930: "Dixie Oil Pool, Caddo Parish, Louisiana.

# Important Data on Fields on and Flanking the Sabine Uplift

## LOUISIANA

| Field and Parish | Oil or gas: producing depths and formations* | Remarks: type structure |
|---|---|---|
| **BIENVILLE PARISH—** | | |
| Lake Bistineau | Gas at 1900 ft: Blossom; gas (main pay) at 2400-2500 ft: Tokio. | Anticline separated from Elm Grove by saddle. |
| **BOSSIER PARISH—** | | |
| Bellevue | 19 gravity oil at 300-400 ft: Nacatoch. Some gas at 1700-1800 ft: Glen Rose. | Dome connected on west with Sabine Uplift by saddle. |
| Elm Grove | Gas at 800-900 ft: Nacatoch; gas at 1900 ft: Blossom; gas (main pay) at 2450 ft: Tokio. Little oil at 1550 ft: stray sand under Annona chalk before reaching Blossom, in top part of Ozan | Anticline. |
| Sligo | Gas at 900-1000 ft: Nacatoch; gas at 1700 ft: Blossom; main gas at 2400 ft; Tokio; and gas at 3200- 3300 ft; Red Beds. | Anticline separated from Elm Grove by a saddle. |
| **BOSSIER-WEBSTER PARISHES—** | | |
| Carterville-Sarepta | Oil and gas at 2700 ft: Blossom; main gas at 3000-3100 ft: Giles sand, probably upper Tokio. Oil at 3100-3200 ft: probably Tokio. | Slight anticlinal structure with closure all around. |
| **CADDO PARISH—** | | |
| Bethany | Lies mostly in Texas: see Texas fields. | |
| Caddo Lake | Oil at 1600-1800 ft: Oil at 2200-2300 ft: Tokio. | |
| Cedar Grove | Depleted gas field—gas 900 ft: Nacatoch. | Part of Shreveport gas field; part of Shreveport structure, separated by saddle. |
| Dixie | Oil, 42 gravity, at 2400-2500 ft: basal Tokio. | Terrace on slight anticlinal nose; southeast extension of old Caddo field. |
| Hosston | Oil and gas at 1000-1100 ft: Nacatoch; also gas at 2700 ft: Tokio. | Northeast-southwest fault separates Hosston from Pine Island, leaving closed fold on each side of fault. |
| Pine Island | Oil and gas at 2800 ft: Glen Rose. Gas at 3600-3900 ft, rich in gasoline: lower Glen Rose. | Very small dome part way down northeast flank of Sabine Uplift. |
| Rodessa | Gas rich in gasoline (2000 gallons to million cubic feet) at 5500 ft: Glen Rose. New field, few wells. | Northeast-southwest fault with upthrow on northwest; wells start on down side, go through fault, getting product on from upthrow side. |
| Shreveport | Depleted gas field—gas at 900 ft: Nacatoch. | Fairly smooth anticlinal fold. |
| Waskom | Lies mostly in Texas: see Texas fields. | |
| **CLAIBORNE PARISH—** | | |
| Haynesville | All oil—main sand 2800 ft: Blossom; one well made 20 bbls. oil daily at 4500 ft: Glen Rose. | Slight anticlinal structure with closure all around. |
| Homer | Oil at 1000-1200 ft: Nacatoch; oil at 2000-2200 ft: Blossom. | Sharp dome-like structure, severely faulted, with main fault northeast-southwest. |
| **DESOTO PARISH—** | | |
| Benson | Gas and oil, few wells, at 3100 ft: Tokio or Lower Cretaceous at contact | Terrace or sand lens: no definite structure; resembles Pleasant Hill. |
| Holly | Oil and gas at 2850 ft: lenticular sand and volcanic ash formation few feet above base of Upper Cretaceous: probably of Woodbine age, being lower than definite Tokio, and corresponding to productive horizon of big East Texas field and that of Desoto-Red River fields (Bull Bayou, etc). | New field; 40 acres. |
| Spider | Gas from several wells at 3050 ft: at contact of Upper and Lower Cretaceous (Tokio?). | Terrace or sand lens: poorly defined structure; like Pleasant Hill in production and structure. |
| **DE SOTO-RED RIVER PARISHES—** | | |
| Bull Bayou, Crichton and Dolet Hills | Oil at 2600-2700 ft. Oil sand called Tokio but may be of Woodbine age. It is at base of Upper Cretaceous or possibly in top of Lower Cretaceous. | Northeast-southwest fault, 400 ft. in Upper Cretaceous and over 2000 ft. in Lower Cretaceous divides field into two parts. |
| Naborton District | Gas at 800 ft: Nacatoch. Little oil at 2600-2700 ft. from same formation as on Bull Baycu side of fault. | On north side of fault described for Bull Bayou. |
| **SABINE PARISH—** | | |
| Blue Lake | Same conditions and formations as at Zwolle. | |
| Pleasant Hill | Oil and gas at 3200 ft: sand called Tokio but may be of Woodbine age, being lower than definite Tokio. It is at base of Upper Cretaceous or possibly in Lower Cretaceous (Washita). | Terrace or sand lens; no definite structure. |
| Zwolle | Green oil, 40-44 gravity, at 2300-2700 ft. from Zwolle marl, which is remnant of Arkadelphia (shale), Nacatoch (sand and lime), and Saratoga-Marlbrook (marl) formations. These remnants rest on top Annona chalk, and most wells get production at contact of marl and the Annona, although the oil is from deeper horizons; chemical analyses of waters in chalk being same as in Blossom. | Network of small faults. The crevviced condition gives erratic results and high percentage dry holes in drilling. |
| **WEBSTER PARISH—** | | |
| Cotton Valley | Oil at 2500 ft: Blossom. Gas exceedingly rich in gasoline at 4600-4700 ft: Glen Rose. | Slight anticlinal structure with closure all around. |
| Shongaloo | Gas and little oil at 2700 ft: Blossom, oil being on north and south edges of field. | Slight anticlinal structure with closure all around. |

## TEXAS

| | | |
|---|---|---|
| **HARRISON COUNTY—** | | |
| Waskom | Little oil, few wells, at 2500 ft: Tokio. Gas at 900-1000 ft: Nacatoch; at 1450 ft; 1900-2000 ft; 2200 ft: Blossom; 2300-2400 ft; 2500-2600 ft; Tokio; 2900-3000 ft; and 4600-4700 ft: Glen Rose. Production mostly from Nacatoch and Tokio, but some good Blossom wells. | Dome on main Sabine Uplift. |
| **MARION COUNTY—** | | |
| Caddo Lake | Field lies mostly in Louisiana: see Caddo, Louisiana. | |
| **NACOGDOCHES COUNTY—** | | |
| Nacogdoches and Chireno | Heavy oil at few hundred feet: Queen City sand, lower Claiborne. | |
| **PANOLA COUNTY—** | | |
| Bethany | Same formations, production and depths as Waskom, Harrison County. | Dome on main Sabine Uplift. |
| **SHELBY COUNTY—** | | |
| Shelbyville | Abandoned oil field: oil at 1900 ft: Nacatoch; also 37 gravity oil at 2650-3000 ft: Blossom. | Probably sand lenses or terrace. |
| Pickering | Oil and gas: 3240-3260 ft: probably Washita. | Gulf's wildcat, Pickering 1. |
| **RUSK, GREGG, SMITH AND UPSHUR COUNTIES—** | | |
| East Texas Field | Oil at 3575-3775 ft: Woodbine sand. | Sand pinches out along old shore line on west flank of Sabine Uplift. |

*Blossom sand is at base of Ozan formation.

large sub-surface structure, approximately eight miles long (east to west) by five miles wide, lying between the towns of Center and Choice, and along the southeast edge of the Sabine Uplift. That large anticlinal structure was interpreted by the torsion balance investigation as having two smaller domes on it, one on the east end and the other on the west. In accordance with that interpretation a wildcat location was made at the crest of each of those local domes, and both locations were drilled. That on the local high on the east portion of the anticline was Sloane Prospecting Company's and Tokio Oil Company's Windham 1, A. M. English Survey, immediately west of the town of Shelbyville, and it developed oil and gas production, although not in commercial quantity. With surface elevation of 230 feet and total depth of 3400 feet, this well logged 93 feet of Blossom formation, from 2662 feet to 2755 feet, and from that horizon it yielded gas which built up pressure of 500 pounds. The top 23 feet of the Blossom had oil and gas, followed by a three-foot shale break, 13 feet of pure gas sand, and four feet of hard shale, the remainder of the formation being sand with slight oil odor and gas.

Failing to produce oil from that depth, the test was deepened and it logged 23 feet of Tokio formation, all of which was sand carrying oil, the top of the sand being at 3327 feet, or 3097 feet below sea level. From the bottom of the Tokio to the bottom of the hole was chalk. Although this well yielded some 37 gravity oil, with the fluid standing at the top of the casing, it would not flow, and it was reported in the early part of July to have been abandoned, although the towners for a time contemplated putting it on the pump.

Location of this well is only about five miles due west of the Shelbyville oil field developed by The Texas Company a little over a decade ago but subsequently abandoned. That field yielded 37 gravity oil from the Blossom (basal Ozan) at 2650 to 3000 feet, and also had a little production at 1950 feet, probably from the Nacatoch.

The other wildcat location mentioned above as being on the local high on the west part of the torsion balance prospect is Sloane Prospecting Company's F. B. Sanford 1, M. M. Vann Survey. According to recent reports it was shut down in shale at 3417 feet.

As mentioned above, this prospect of Sloane Prospecting Company is along the edge of the Sabine Uplift, the Lower Cretaceous formations here showing rapid dip to the south. While Georgetown lime of the Lower Cretaceous was found at 3900 feet in The Texas Company's Pickering 1, a few miles south of Sloane Prospecting Company's and Tokio Oil Company's Windham 1, it was found at 3000 feet in a wildcat about 10 miles to the north and at 2800 feet in Loring Oil Company's Pickering 1, Yordt Survey, 15 miles north.

An interesting recent development occurred in the northwestern corner of Shelby County, higher up on the Sabine Uplift, when E. L. Chapman et al's Pickering Lumber Company 1, about one mile due west of Haslam, blew out and ran wild for a while, spraying fresh water and yielding gas at an estimated rate of 25,000,000 cubic feet daily. The gas was from the upper Trinity at 3864 feet.

About eight miles north of the Shelbyville field of The Texas Company was some interesting development by Gulf Production Company in 1928 and 1929. Its Pickering Lumber Company 1, P. W. Harvey Survey, 14 miles northwest of Center, was completed as a 154-barrel producing well November 16, 1928, yielding 38.5 gravity crude from oil sand, probably Washita in age, at 3243-3260 feet, with total depth of 3382 feet and surface elevation of 251 feet, A second test on the same lease was a dry hole at 3560 feet. About two miles northeast of those two wells the same company drilled one of the deepest tests ever drilled on the Sabine Uplift, the Addie Carraway 1, G. H. Patterson Survey. It was abandoned about October 1, 1929, at 6580 feet.

In north central Shelby County, Loring Oil Company (Benedum Trees Oil Company) drilled two interesting tests a few miles east of Teneha. It is reported that these wells encountered Georgetown lime around 2800 feet. One of them, Pickering Lumber Company 1, D. T. F. Yordt Survey, was abandoned in December, 1929, at 2860 feet, after testing salt water. The other, B. C. McCann 1, D. G. Greene Survey, reached depth of 5520 feet before being abandoned July 24, 1930. It had tested dry on drill stem test at 4200 feet.

South of Shelby County lies Sabine County, which has had one recent wildcat test of interest, Loring Oil Company's (Benedum Trees Oil Company) Nona Mills Lumber Company 1, James Mason Survey. It was abandoned in May, 1931, at 4803 feet in lime after encountering top of the Lower Cretaceous at 4404 feet.

Considerable drilling was in progress in Nacogdoches County several months ago, but interest has waned to considerable extent, since no encouraging results were obtained. Benedum-Trees Oil Company's Conkrite 1, one mile south of Chireno, was recently reported coring at 5320 feet. Although it is the deepest test ever drilled in the county, it had not encountered shows of significance to the above depth. It cored chalk at 3100 feet, 4050 feet, 4138 feet, and 4563 feet, and cored shale a little above 5150 feet.

The shallow wells in the Nacogdoches field near the town of Nacogdoches are small producers, yielding two to four barrels of heavy oil daily from the Queen City sand of lower Claiborne formation, Eocene Tertiary age.

*Kilgore—How much of East Texas oil is being moved*

# Simple Method Successful in Controlling East Texas Burning Well

WHEN expensive efforts with a chemical extinguisher had proved futile, and after a costly and time-consuming attempt through digging of a tunnel had been decided upon as a next resort, a burning well in the flush East Texas field was summarily brought under control through a simple plan involving only horse sense and simple mechanics, a few hastily assembled pieces of equipment, cool headedness under intense heat, and a liberal supply of courage.

Before proceeding with the tunneling project at Paul Vitek et al's G. W. Eaton 5, near Overton, officials in charge of the fire fighting decided to give the plan of Barney Carter and associates a trial; and the idea worked with notable success. Carter is an independent operator and contractor, of Tyler, Texas, and Ranger, Texas. Among those whose co-operation he enlisted was H. L. Patton, sawmill operator and teaming contractor of Houston, who procured from a major company the large drag line which was employed, and who took active part in actual carrying out of the work on the burning well.

Although the ingenious and interesting taming of this well, which had previously claimed the lives of three men, was described in these columns last week, that account is herewith supplemented with illustrations and additional details.

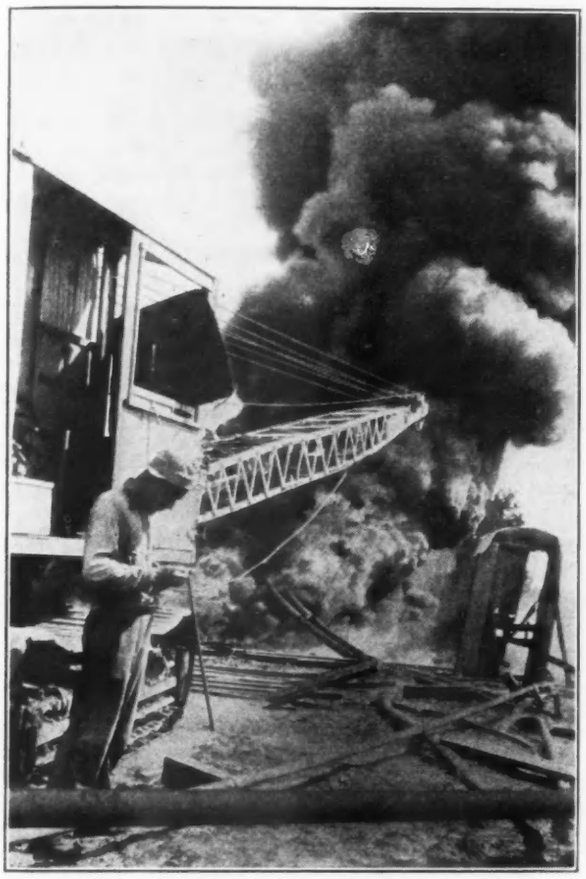
The flames of the burning well were extinguished by swinging a four-inch water line from the crane of a large drag line, a machine resembling a steam shovel, and by then stabbing the water line through the flames into an open valve on the Christmas tree of the well.

Water was then pumped under high pressure into the well through the tubing, into which the water line had been placed, the pipe through which the water was pumped being held down inside the tubing in spite of the flowing pressure of the well. Going through the tubing to the bottom of the well, and coming back up through the casing around the outside of the tubing, the water finally formed a column extending to the top of the well, and the well was killed by being drowned out. It was dead within 59 minutes after the pumping was started.

Barney Carter devised the extinguishing apparatus, with the aid of officials representing the Vitek interests and H. L. Patton. Alex Bradford of McCamey, Texas, and an assistant, Warren Hurdle of Fort Worth, working without asbestos suits, but with streams of water playing on them, did the close-up work around the well; while the stabbing crew consisted of A. N. Goldsmith of Jackson, Alabama; R. W. (Doc) Hudson of Plain Dealing, Louisiana; Kelton Patten of Cleveland, Texas; and Keller Moss of Huntington, Texas. Hudson is a survivor of the tragedy which stalked over the well when it caught on fire, having been a member of the ill-fated drilling crew.

The fire fighters worked under direction of S. W. Ben-

*Showing the burning well, G. W. Eaton 5, of Paul Vitek et al near Overton, East Texas, before being brought under control through use of a simple arrangement. Water was forced with high pressure pumps through the tubing into the well. The weight of the column of water which then filled the well served to stop the flow of oil and gas, in effect killing the well and accomplishing the desired result. The flames are here shown shooting up vertically from the open tubing*



ninger, production superintendent of the Vitek interests, and E. S. Marshall and John W. Roland, representatives of Earle B. Mayfield and John Stephens, receivers of the company, Paul Vitek himself, head of the company owning the well, having been among the three men who were fatally burned when the well caught on fire.

Nine attempts to stab the water line into the flaming, coke covered Christmas tree were made before the asbestos covered pipe was successfully connected.

Jimmy Crowder of McAllen, Texas, operated the drag line in close proximity to the roaring flames, so that the stabbing crew could make proper connections to the well.

To counteract the intense heat of the flames, water was continually pumped through the lines of the extinguishing system, but in spite of the water some of the metal supports melted and twisted out of shape, rendering the stabbing operations difficult.

### Chemicals Fail

Two hundred drums of carbon dioxide, representing more than 10,000 pounds of chemicals, manifolded into special release equipment, and used under pressure of 1340 pounds per square inch, failed to extinguish the flames when tried

*The large power shovel used to swing a 60-foot boom with water lines into the tubing of the Vitek interests' burning well, Eaton 5, at Overton, Texas. Warren Hurdle, assistant to Alex Bradford, is shown in the foreground*

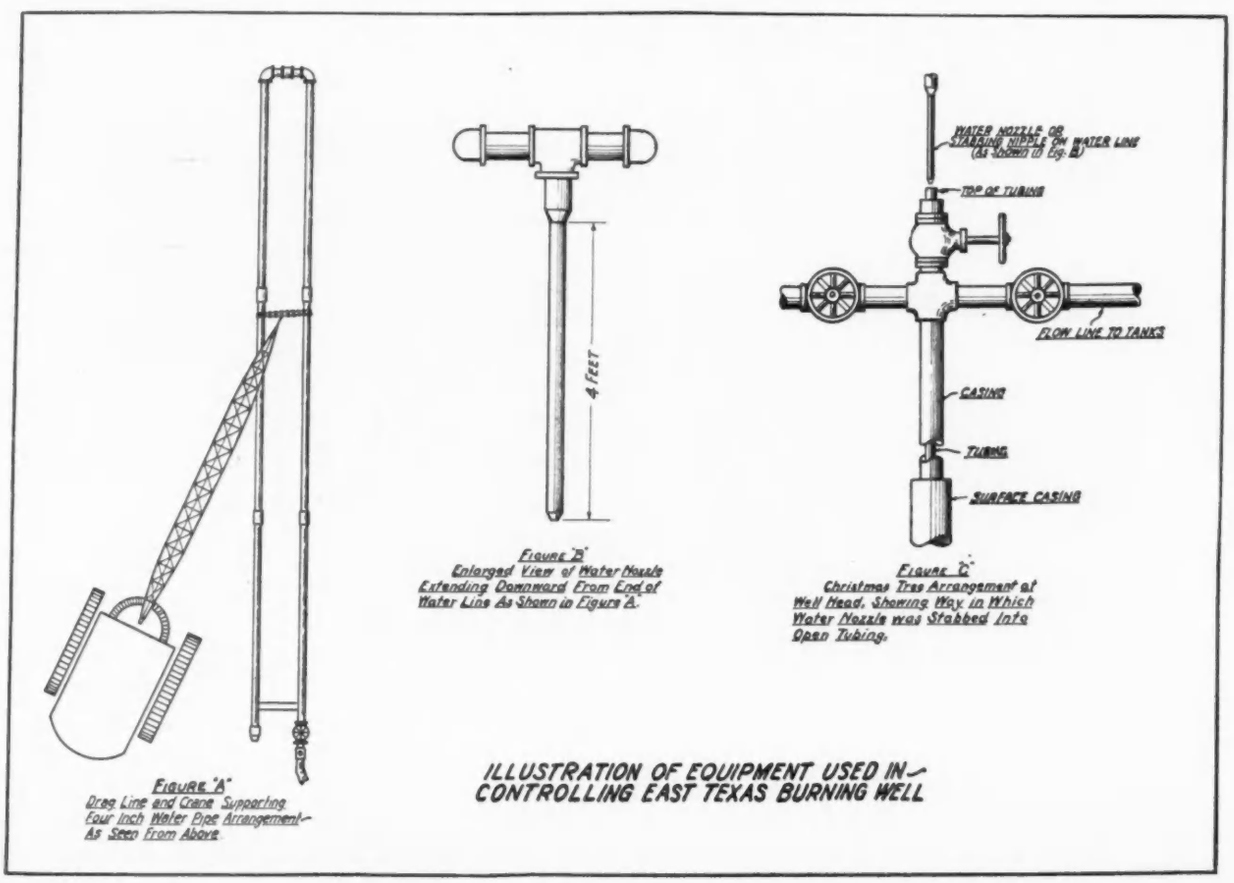



FIGURE "A"
Drag Line and Crane Supporting Four Inch Water Pipe Arrangement— As Seen From Above.

FIGURE "B"
Enlarged View of Water Nozzle Extending Downward From End of Water Line As Shown in Figure "A."

FIGURE "C"
Christmas Tree Arrangement at Well Head, Showing Way in Which Water Nozzle was Stabbed Into Open Tubing.

ILLUSTRATION OF EQUIPMENT USED IN CONTROLLING EAST TEXAS BURNING WELL

a week before the above described killing method was used.

Plans were then laid to excavate a tunnel from a point a safe distance from the fire to the well, and then to tap the casing at a point below the surface, after which it was intended that water would be pumped into the well under high pressure through the opening made in it from the subterranean tunnel. Had those plans been carried through, as they were on the Bell & Grady burning well in the East Texas field, the fire would have been extinguished through the same principle, killing by drowning, as that used by Barney Carter and his associates. The latter accomplished the same result with much smaller expense and effort, however, than the tunneling procedure involves.

Since it had been decided that the tunnel method would be resorted to on the Vitek well, Sandy Hogan, one of the miners who directed the tunneling on the Bell & Grady well at Kilgore, arrived upon the scene from Miami, Oklahoma, and plans for the excavating work moved forward.

As part of the equipment for digging the shaft to the well a large power shovel or drag line was moved to the site, and it was that machine which furnished the means for connecting the water line to the well under the plan conceived by Carter and Patten.

A tapered water nozzle was devised by Carter and his associates for connecting the water line with the tubing. The water line arrangement was in the form of a 60-foot boom, supported by the crane of the power shovel or drag line. In detail, that 60-foot boom into which the water line was made consisted of two units of four-inch pipe, three joints to the unit, placed side by side, and joined together at the burning end of the well. That connection was formed by means of an ell at the end of each of the units, with a downward pointing tee between the two ells. The water was to be pumped in through one of the four-inch lines, and if desired also through the other four-inch line. In actual practice, however, the valve on one of the lines at the pumping end was kept closed, the water being forced from the other line into the arrangement and out through the tee at the end of it. The main purpose of the double lines in fact was to give the desired rigidity to the tee, through which the water was pumped downward into the well. Below the steel tee there was placed a downward pointing nipple, and the specially designed tapered nozzle was next below the nipple.

After connecting up of this water line it was to be put into position over the well, and the nozzle was to be dropped into the tubing, after which water was to be forced into the well with mud hog pumps operating under high pressure.

The work was then carried out as planned. A local welding shop turned out a pointed water spout, which was reduced to a sharp point through a series of nipples in order to fit inside the 2½-inch tubing. The 60-foot crane on the drag line was stripped of its surplus equipment, and the four-inch water line with the nozzle at the end was attached. The nozzle was then thrust finally into the tubing.

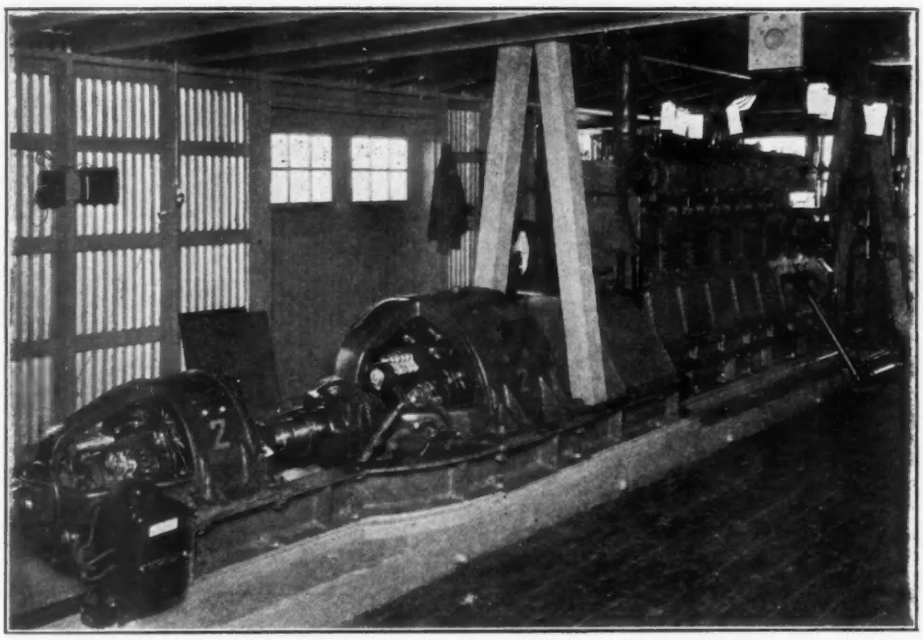
In addition to flowing through the tubing the well was leaking oil through the flow lines leading off from the 6⅝-inch casing, or oil string, since efforts to close valves on those lines had not been entirely successful. Pressure from the pumps on the water line was great enough to reverse the stream of fluid in the tubing, and consequently the water returned to the surface with the oil outside the tubing. Finally a cloud of steam burst into the air, and the fire died out.

---

Tyler, Texas.—Vitek et al's G. W. Eaton 5 was restored to production under control by diverting production from another well on the lease into the tubing, with flow lines connected to flow tanks. This injected oil and gas production flushed the well clean of water, and revived the flow in short order. However, the well that had burned for 17 days only gauged 144 barrels oil per hour on open tubing flow, thus indicating that it was a much smaller producer than the average for the immediate area, or the period of wild flow greatly depleted the sand of its flush qualities at this particular location.

*Men who took active part in extinguishing and controlling Paul Vitek et al's G. W. Eaton 5, wild well near Overton, Texas.*

*Reading from left to right, the four men in the foreground are as follows: R. W. (Doc) Hudson, of Plain Dealing, Louisiana, farm boss for the Vitek interests; H. L. Patton, of Houston, who assisted the inventor, Barney Carter, in supervision; Alex Bradford, of McCamey, Texas, who did the close-up work in the flames; and Warren Hurdle of Fort Worth, assistant to Alex Bradford*



*125 KW direct current differentially compounded generator and 15 KW exciter driven by 200 HP Diesel engine for oil well rotary drilling by generator voltage control*

# Direct-Current Drive Late Development in Oil Well Drilling

By F. R. GRANT

*Industrial Engineering Department General Electric Company, Schnectady, N. Y.*

ONE of the latest and most important developments in the drilling of oil wells by the rotary method is the application of direct-current electric power for driving the drilling rigs and mud pumps. It is the purpose of this article to outline briefly the operating characteristics of a direct current drive, and to call attention to some of the advantages which make it especially favorable for oil well rotary drilling.

### Speed-Torque Requirements for Rotary Drilling

Any type of draw works drive should be able to develop extremely heavy torque at very low speeds for handling long strings of drill pipe. It should also be capable of carrying comparatively heavy overloads, at normal speed to permit handling drill pipe expeditiously, and of operating considerably in excess of rated speed to allow handling the empty hook at the highest practicable rate.

The mud pump drive should be capable of developing the normal torque required by the pump continuously at rated speed and should be able to develop high torques at reduced speeds. The speed should automatically drop off with increase in load and, if necessary, it should stall at a value of torque which will not cause damage to the pump or gearing.

A comparison of the operating characteristics of three types of drives in common use with the essential power requirements of rotary drilling revealed that there was a real need of a drive which would combine speed-torque characteristics similar to those of a steam engine with the operating economy, flexibility, and ease of control obtainable with electric equipment, and furthermore, allow the use of internal combustion engines as prime movers where commercial electric power is not available.

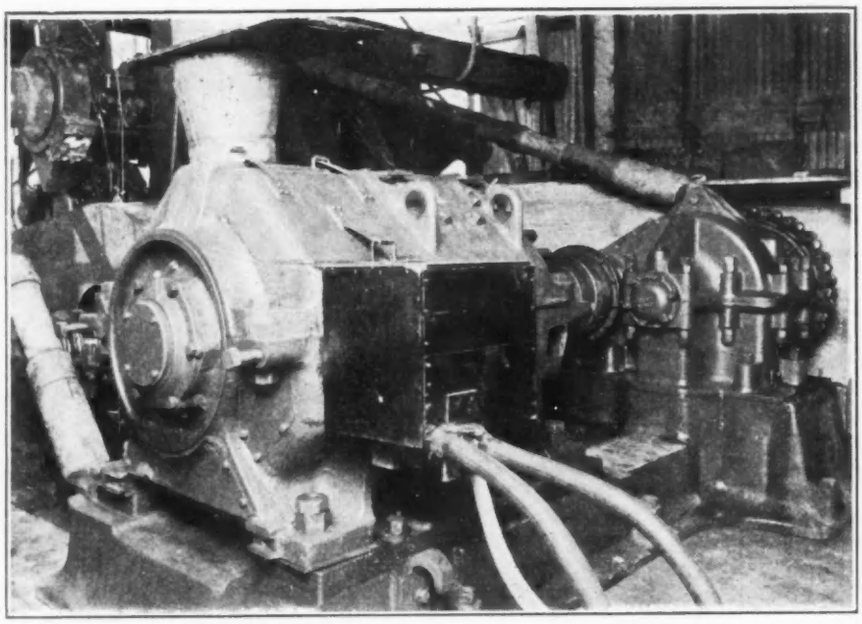
The use of direct current equipment seemed to be the logical means of meeting these requirements and a system of drive has been developed and perfected in which direct current motors are used for driving the draw works and mud pumps. These motors receive their power from direct current generators with special field windings, such that the speed-torque characteristics of the motors closely approximate the ideal requirements for rotary drilling, and give economies in power consumption equal to, or better than obtained with induction motor driven rigs. Where central station power is not available, internal combustion engines, operating at constant speed, may be used to drive the gen-

erators, thus realizing a substantial saving in fuel and water consumption, and eliminating the mechanical complications which are necessary for direct drive by this type of engine.

### Details of Equipment

Such an equipment in its simplest form consists, essentially, of:

- Two duplicate direct current generators with direct connected exciters driven by either electric motors or internal combustion engines.
- A direct current motor for driving the draw works and rotary table.
- Two duplicate direct current motors for driving the mud pumps.
- The necessary control and protective equipment.



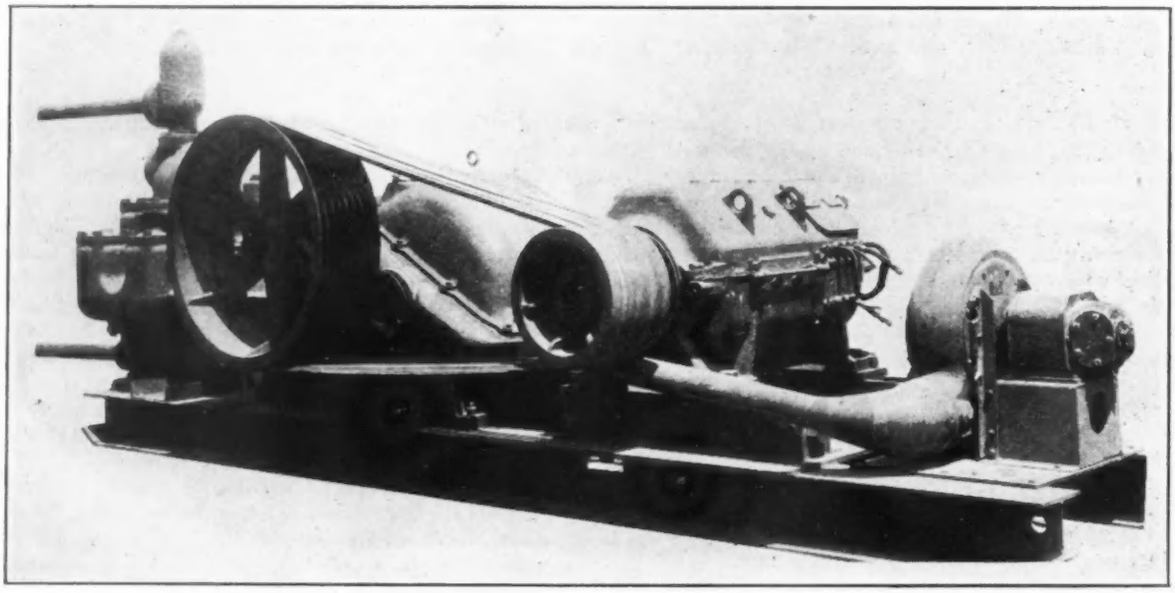
150 *HP enclosed forced-ventilated direct current mill type motor, operated by generator voltage control, driving the draw works of a rotary drilling rig*

### Generators

The generators are of differentially compound wound type having a separately excited shunt field winding, and a series field winding whose action is opposed to that of the shunt field winding. This gives the generators a drooping voltage characteristic, which is responsible for the especially favorable speed-torque characteristics of the motors and is, in fact, the key to the successful operation of the entire equipment, as will be apparent from the discussion which follows. Since it is not necessary that the power plant be located on the derrick floor, the generators are not made gas-proof, as it is cheaper and more desirable in many ways to locate the generating plant a sufficient distance from the well, so it will not be exposed to gas in dangerous quantities. For this reason, the generators are of the open type construction, the same as is used in ordinary industrial practice.

### Exciters

Each generator is equipped with a direct connected exciter large enough to furnish all the excitation required at any time, and, in addition, to supply sufficient power to drive blowing equipment for furnishing ventilating air to the mud pump and draw works motors. These exciters are of the open type, compound wound, self-excited, and



60 *HP separately ventilated direct current mill type motor driving mud pump. Blower driven by totally enclosed protected type motor to permit mounting blower on same skids with pump. The intake air was piped from a remote point to insure freedom from gas*

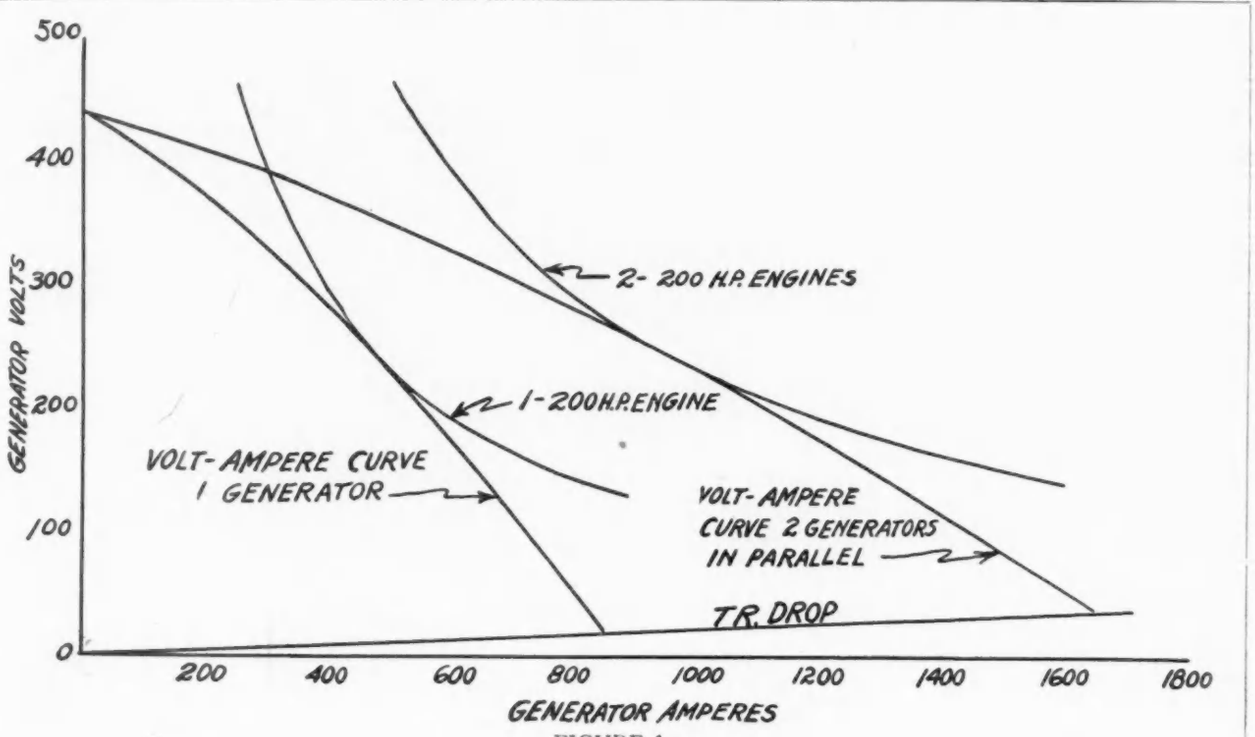



FIGURE 1

*Typical curves of two 115 kilowatt generators showing drooping voltage characteristics and relation between generator output and engine capacity*

adjusted to give their rated voltage at no load and at full load, thus insuring practically constant excitation voltage under all conditions of load.

### Draw Works Motor

The motor for driving the draw works and rotary table is totally enclosed, separately ventilated and of the heavy duty mill type construction to withstand the very severe duty to which it is subjected. It is shunt wound, separately excited and is furnished without a base. This motor can be arranged either with a single shaft extension for direct connection to a separate gear unit or can be of the back geared type, with the drive to the draw works taken directly from the back shaft extension, thus eliminating the separate gear unit with its attendant installation and line-up problems.

### Mud Pump Motors

It is customary to install two mud pumps for each drilling rig, one of which is held as a spare, to insure one pump always being in operating condition. For this reason two mud pump motors are required. These motors are also of the enclosed separately ventilated type, since they are located near the well and exposed to any gases which may be present. Mill type motors of heavy construction are recommended for the mud pump motors, as well as for the drilling motor, for several reasons. Their sturdy construction makes them especially adaptable to oil field service, and since they are designed to operate at comparatively low speed, it greatly simplifies the problem of speed reduction between the motors and the pumps. Furthermore, the stored energy in the rotor of a mill type motor is considerably less than in a higher speed industrial type motor of the same horsepower rating, thus tending to prevent "overshooting" in pump pressure in case of suddenly applied load or a sudden increase in load. This limits the pressure which might be developed under such conditions to lower values than would be obtained if higher speed motors having more flywheel effect were used. This feature is of primary importance and will go far towards justifying the added cost of the mill type equipment.

The mud pump motors are furnished with shaft extension suitable for mounting a rope sheave or pulley and with suitable sliding base or rails for belt adjustment. Ventilating air for these motors, as well as for the draw works motor, is supplied by a small blower, located remote from the well to insure a supply of air free of gas in dangerous quantities.

### Control Equipment

The system of control employed with these direct current drives is the variable generator-voltage (Ward-Leonard) type. With this system of control, the speed and direction of rotation of the motors are governed by varying the strength and polarity of the separately excited fields of the generators.

The control equipment consists essentially of a main switching unit, located at the generating plant and the necessary accessories which must be installed at the well convenient to the operator. All control devices located at the derrick are of the totally enclosed oil immersed type to protect against the ignition of explosive gas.

An oil-immersed transfer switch is provided for changing from separate operation of the generators, as for drilling service, to parallel operation for hoisting service. The proper connections for either method of operation are made automatically by means of contactors, depending on the position of the transfer switch, thus making it unnecessary for the driller to do any manual switching in the ordinary operation of the equipment.

### Capacity of Equipment Generators

In selecting an equipment of this kind for any particular installation, due consideration must be given to the various features which affect the operation in order that the complete assembly will meet all of the operating require-

ments. In determining the generator capacity, the first thing to be considered is the amount of power which can be economically used. This will depend on many things, among which are the ultimate strength of the derrick, the depth of well to be drilled, the capacity of the mud pumps, the speed at which hoisting is to be done, the size of drill pipe, etc.

If the generators are to be driven by internal combustion engines, it is customary to decide first on the number and size of engines which will be used, and then to select electrical equipment which will utilize the maximum output of these engines in the most economical way.

If the generators are driven by electric motors, it will be necessary to decide how much power is to be used and the generators may then be designd to limit the maximum power to that amount. In commercial drilling, it is considered essential that the equipment be large enough to handle the maximum length of drill pipe on the second speed (next to the lowest) of a four-speed draw works, as the lowest gear ratio gives such slow hoisting speeds that it is used only for emergency conditions, such as handling the pipe with one generator, etc.

It is possible that the size of mud pump will be the determining factor in selecting the capacity of the generators. This is especially true in deep drilling territory where large size pumps are used. If only two generating equipments are used, each generator must be large enough to furnish all the power required for driving the mud pump. On the other hand, in case comparatively small mud pumps are used, the power taken to handle drill pipe may be the larger and will determine the generator rating.

### Draw Works Motor

The capacity of the draw works motor is determined by several factors entering into the operation of the equipment. The motor must have sufficient commutating capacity to successfully handle without injury the maximum current to which it can be subjected. This current is determined by the characteristic curve of the generators when operating in parallel. The motor must also have sufficient capacity to furnish the power required for driving the rotary table continuously, although this is comparatively small and, usually, is not a determining factor in selecting the motor rating. The heaviest duty which the draw works motor has to perform is in handling drill pipe and the motor must be large enough to hoist the maximum length of drill pipe, at the speeds required, without over-heating. The load when handling pipe is of an intermittent nature and this is taken into account in selecting the motor, the rating being based on the equivalent continuous load or the "root mean square" heating of the hoisting cycle.

### Mud Pump Motor

In selecting the motor for driving the mud pump, the rating will be determined entirely by the capacity of the pump and should be specified by the pump manufacturer. The motor must be large enough to carry continuously the normal power required by the pump without exceeding its temperature rating.

### Generator Characteristics

As mentioned above, the generators, due to their differential winding, have a drooping voltage characteristic, giving a comparatively high value of voltage at no load, and a low voltage at heavy load. This characteristic is shown by the curves in Figure 1, wherein the voltage of such generators is shown plotted against amperes output. With such a voltage characteristic, the kilowatt output of the

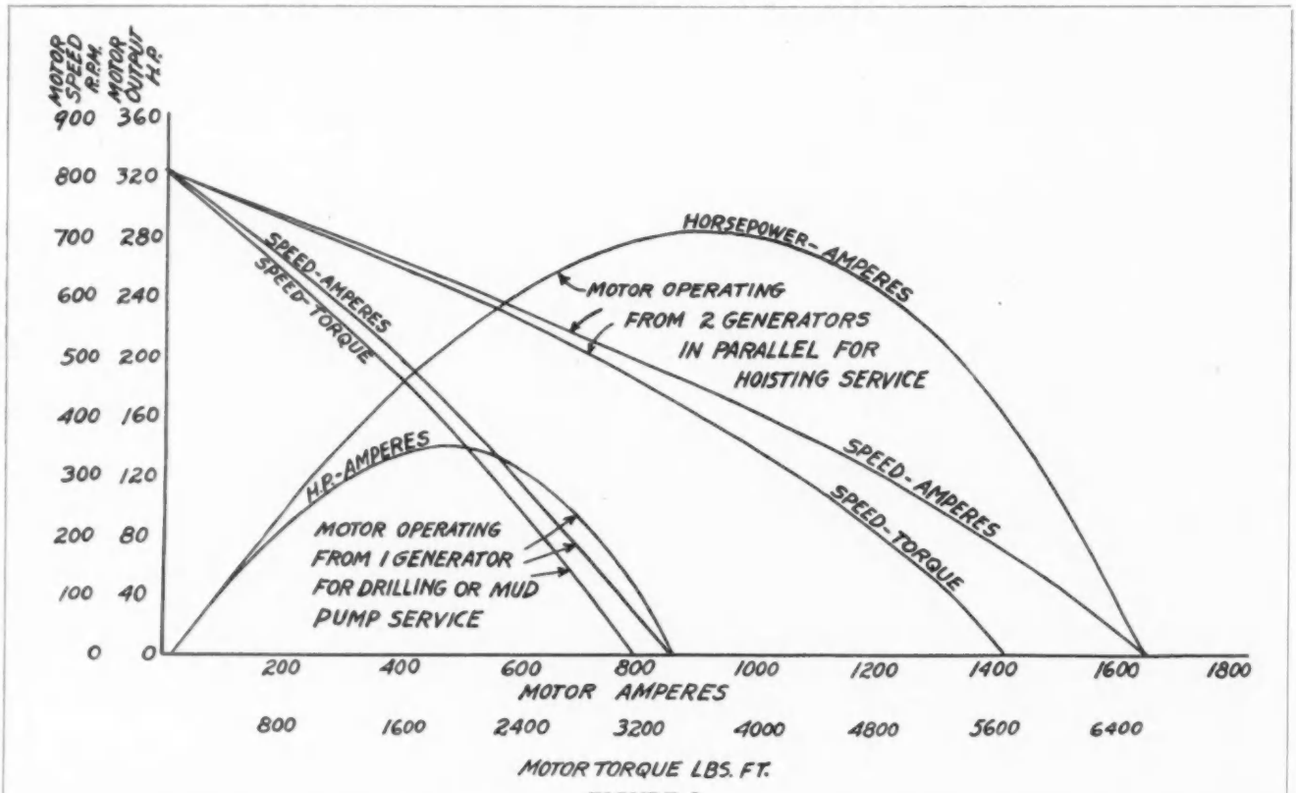
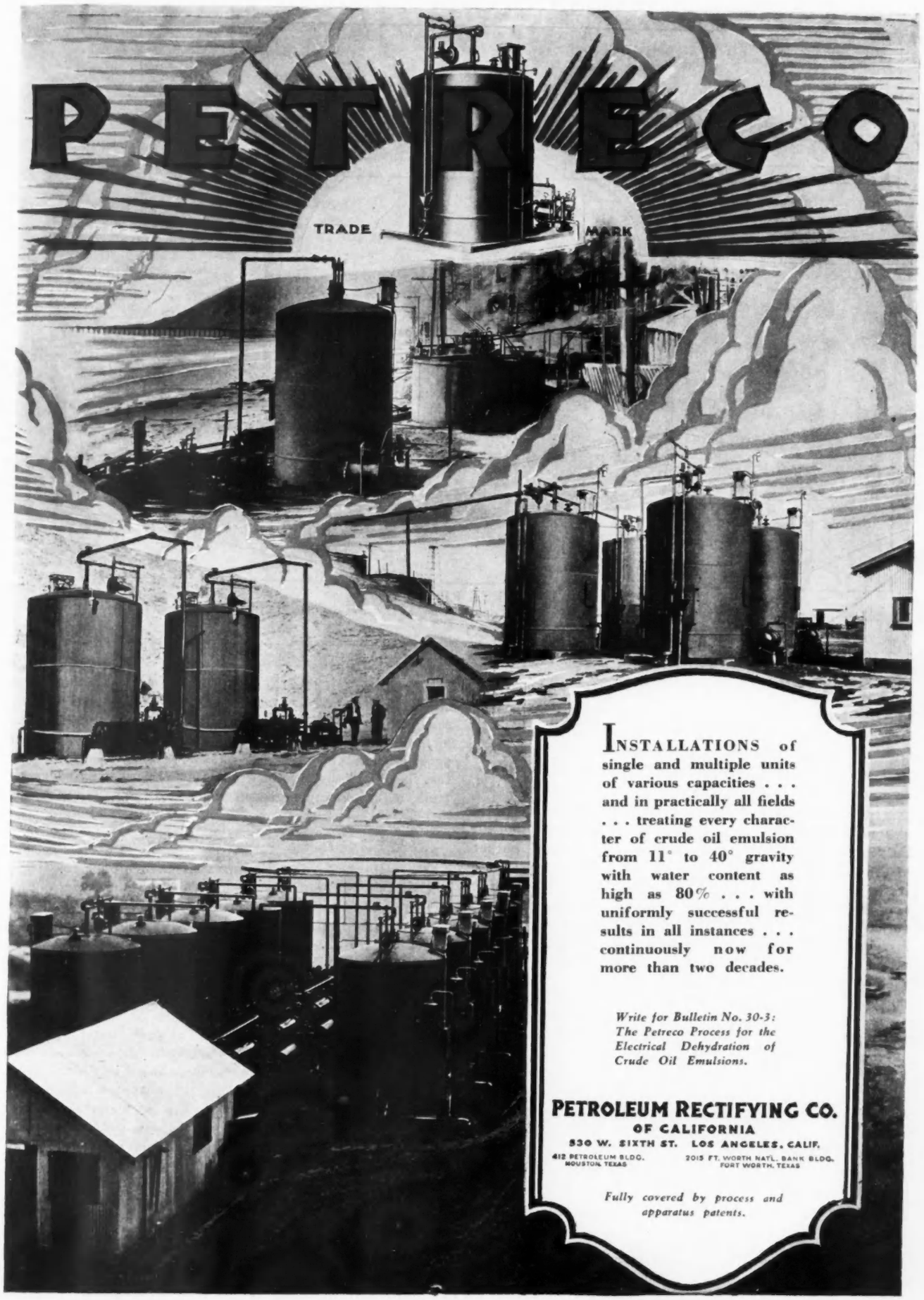



FIGURE 2

*Typical performance curves of a 200 horsepower type motor when operating from 115 kilowatt generators with voltagle characteristics as shown in Figure 1*

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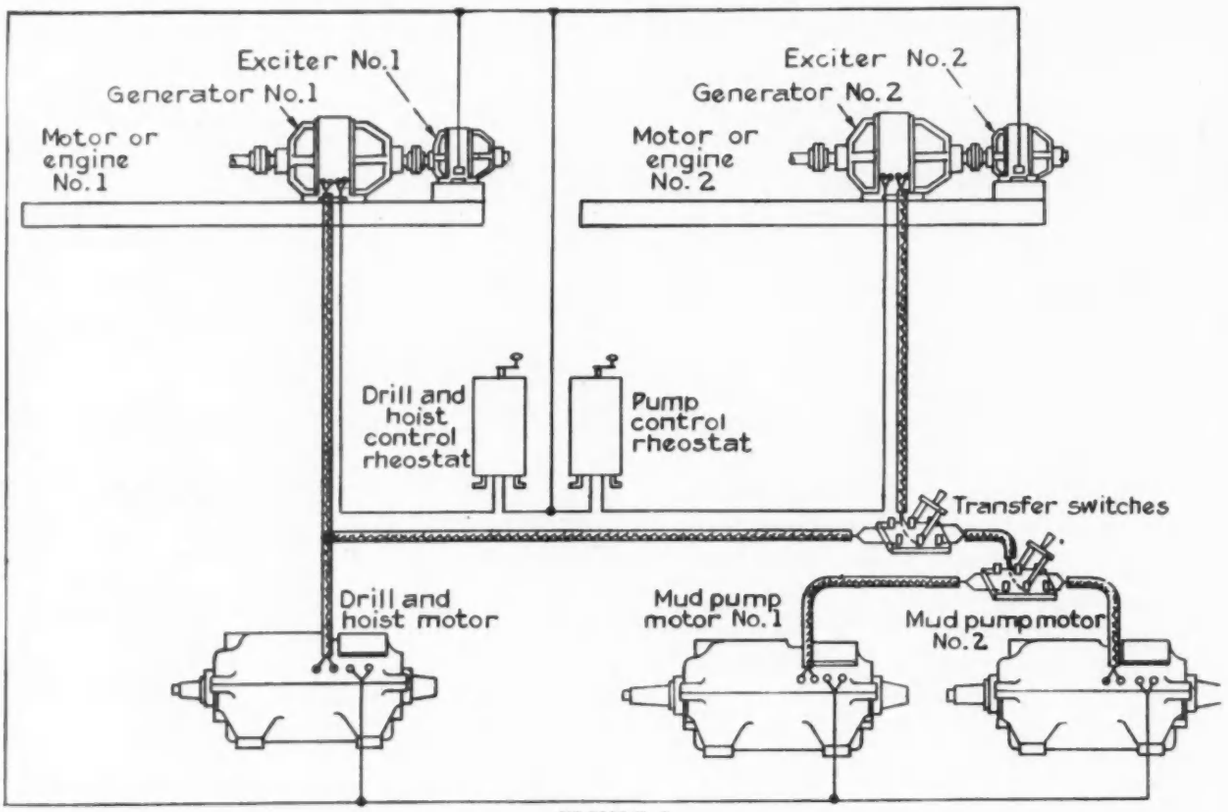


FIGURE 3
*Schematic diagram of direct-current drilling with Ward-Leonard control system*

generator is limited to a certain definite maximum beyond which it is impossible to go regardless of the load which may be applied to the generator. This characteristic is especially advantageous if internal combustion engines are used for driving the generators, since the generators can be so designed that the maximum load obtainable does not exceed the capacity of the engine, thus making it impossible to stall the engine by overloading the electrical equipment. Curves of engine output, expressed in volt-ampere output of the generator, are plotted in conjunction with the generator voltage characteristics, and it will be noted that the two curves are tangent at the point of maximum kilowatt output of the generators, and at this point, the engine is carrying its rated load. A further increase in current output of the generator causes a falling off in generator voltage to such an extent that the kilowatt output is less than at the tangent point and the engine is running at less than rated ouput. So long as the generator characteristic curve does not cross the engine curve, it will be impossible to stall the engine. In plotting the engine output curves, allowance has been made for the losses in the generators and for the power taken to drive the exciters, and engine auxiliaries.

The line marked "IR drop" in Figure 1 shows the estimated voltage drop in the draw works motor and in the main circuit between the generators and the motor. The point at which the generator curve crosses this line indicates the current at which all of the voltage supplied by the generators is utilized in overcoming the losses in the motor and leads, and when this condition is obtained, the motor will stall, since there will be no voltage available for power purposes. This point, therefore, represents the maximum current which it is possible to obtain and is one of the determining factors in selecting motor size as pointed out above. The range in generator voltage from zero load to the maximum kilowatt output point of the curve is so selected as to give approximately the same ratio between the speed of handling drill pipe in coming out of the hole and the speed of hoisting the empty hook, as is obtained with modern fast steam engine-driven rigs.

### Motor Characteristics

The estimated motor characteristics when operating from one or two generators are shown by the curves in Figure 2. Since the motors are separately excited at a constant potential, their speed is almost directly proportional to the generator voltage, thus being high at light loads and lower at heavy loads. The motor speed can, however, be adjusted to practically any desired value within the range of the equipment. The curves in Figure 2 show the motor characteristics at full generator field excitation. Corresponding curves of lower value are obtained at each controller point, so if 21 point field controllers are used, there would be 20 curves between zero and the values shown in Figure 2.

The horsepower curves show the output which can be obtained from the draw works motor when operating from one or two generators, and when these curves are compared with the corresponding generator voltage curves in Figure 1, it will be noted that the maximum horsepower output is obtained at a current value corresponding to the point where the generator voltage curve is tangent to the engine output curve, and that the horsepower output drops off either side of this point. The speed-torque curves show the tendency of the motor to slow down under heavy load conditions due to the falling off of the generator voltage.

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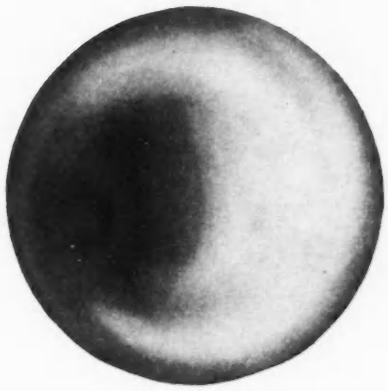

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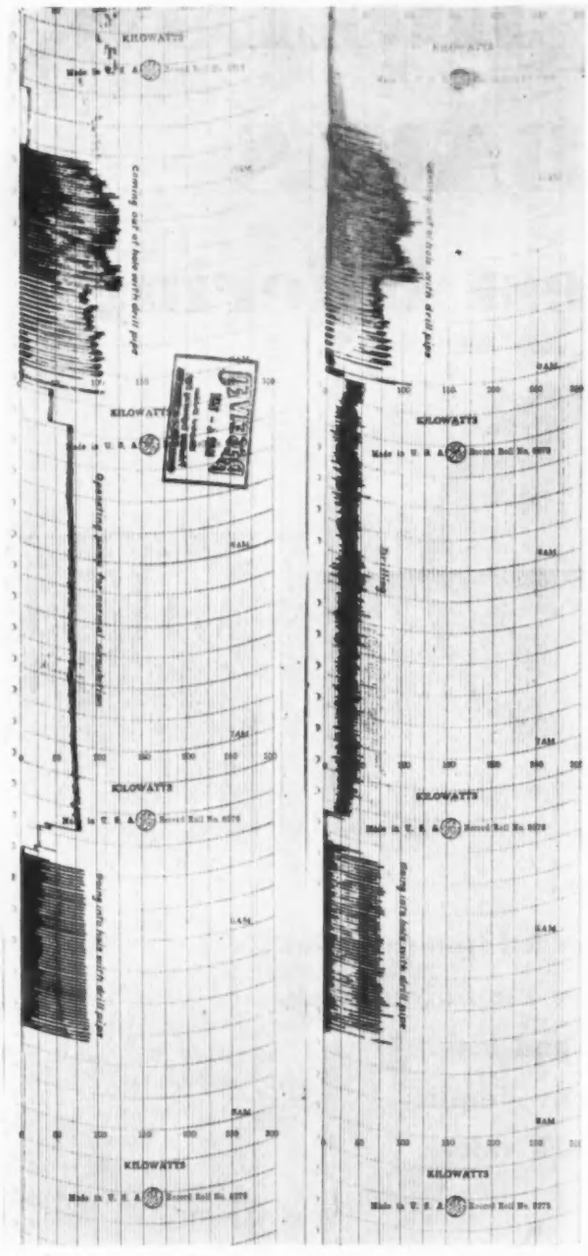


*Output charts of two direct current generators, separately driven by Diesel engines, supplying power to draw works and mud pump motors of a rotary drilling rig, showing separate operation of generators when drilling and parallel operation when handling drill pipe*

This characteristic is especially advantageous in connection with the mud pump, since in case of a restriction in the mud line, the pump will slow down, thus calling attention to the difficulty, or if the mud line becomes entirely stopped up, the motor will stall, but the torque will be limited to some predetermined value, and the engine driving the generator will not be overloaded.

Provision is made in the control equipment so the torque which the mud pump motor can develop may automatically be limited to any desired value less than the maximum, thus protecting the pump against damage due to excessive torque or pressure. This may be necessary if the generator rating is large compared to the capacity of the pump motor or if for any other reason the pump will not stand the maximum torque which the generator in question will allow the pump motor to develop.

It will be noted that the speed torque and horsepower-output curves as shown in Figure 2 are very similar to the corresponding characteristics of a steam engine, which makes the manipulation of a direct current equipped rig almost identical with that of a steam engine driven rig. It is therefore unnecessary to have a specially trained operator to handle this type of equipment, as any driller who is familiar with steam-operated rigs can take over the operation of a direct current driven equipment without special instructions.

### Gear Ratios

Special attention must be given to the selection of the gear ratio between the motor and the draw works in order that the desired speed of handling the empty hook and of hoisting drill pipe will be obtained. It has been found in practice that with six lines in the travelling block the highest practicable empty hook speed corresponds to a rope speed of about 2000 feet per minute at the drum. A gear ratio should therefore be selected which will give this rope speed when the motor is carrying the load corresponding to hoisting the empty hook. It will be necessary to refer to the speed-torque curves of the particular equipment in question to determine the motor speed at this load. In determining the horsepower necessary to hoist the empty hook, allowance should be made for the mechanical efficiency of the rig and it is customary to assume 60 per cent if no actual value of efficiency is available.

The gear ratio between the mud pump motor and the pump should be such that when the motor is delivering the output required to drive the pump at its rated capacity the pump will be operated at its rated speed. It is necessary to refer to the speed curves of the pump motor to determine the motor speed at the required output.

### Operation Drilling

When drilling is in progress, one of the generators is connected to the draw works motor and supplies all of the power required for rotating the table. The other generator is connected to one of the mud pump motors and supplies all of the power for driving the pump. The control for the two generators is entirely separate, so that the speed of either motor may be adjusted to any desired value within the range of the equipment. Ordinarily, the mud pump motor would be adjusted to a definite speed and would operate at that speed continuously. The speed of the drilling motor is held constant or adjusted to different values, as the drilling conditions may require.

### Hoisting

When it is necessary to remove the drill pipe from the hole for changing bits or other reasons, it is essential that all the power available be utilized to give the highest possible rope speed and thus reduce to a minimum the total time for coming out of and going into the hole. Provision is therefore made for connecting the mud pump generator in parallel with the draw works generator to supply power to the draw works motor, thus making the entire output of both generators available for handling heavy loads. When the generators are operating in parallel, their separately excited fields are connected in series and controlled as a single field by the draw works controller, thus insuring identical and simultaneous control of both generators and insuring correct and stable division of load between them

# NATIONAL
## TITAN
# SUCKER RODS

BOX AND PIN ROD
REGULAR

BOX AND PIN ROD
WITH CARBURIZED AND
HARDENED BOX

DOUBLE PIN ROD
WITH REGULAR OR WITH
CARBURIZED AND HARDENED COUPLING

A. P. I. SPECIFICATIONS ◆ QUALITY FORGINGS ◆ FULLY HEAT TREATED BOXES AND PINS ◆ HIGH TENSILE -- HIGH ENDURANCE QUALITIES ◆ SUPERIOR WEARING QUALITIES ◆ PRECISION THREADING

OPTIONAL SPECIFICATIONS:
STRAIGHT CARBON OR MANGANESE ALLOY STEEL ◆ STANDARD OR OVERSIZE JOINTS ◆ REGULAR OR CARBURIZED AND HARDENED BOXES AND COUPLINGS

THE
# NATIONAL SUPPLY
COMPANIES

The drooping voltage characteristic of the generators makes them inherently self-adjusting as to division of load when operating in parallel, and insures stability at all times, even when the generators are operating at slightly different speeds, as may happen when they are driven by internal combustion engines.

### Engine Governors

In order to prevent too great a difference in load between the generators when driven by internal combustion engines, the engine governors should give approximately the same speed regulation for each engine so as to keep the engine speeds substantially the same under all conditions of load when the geenrators are operating in parallel. While the generators would divide the load satisfactorily with the engines operating at any speed, the maximum power available falls off with a reduction in speed and it is therefore advisable that the speed be kept as nearly normal as possible. Any commercial type of governor which will give a speed regulation of not more than eight per cent from no load to full load should be entirely satisfactory if kept in good working order. The engines should be equipped with suitable flywheels to prevent excessive momentary changes in speed, due to sudden changes in load, which cannot be prevented by the governors.

### Variations in Equipmnt—Two Draw Works Motors

The above description refers particularly to equipments where one motor is used for driving the draw works. In cases where the power requirements of the draw works are greater than can be met by the largest mill type motor available, it may be advisable to use two mill type motors, rather than use a different type motor or to incur the expense of developing a larger mill type unit. In such cases, the preferable arrangement is to conect the drilling generator to one of the draw works motors for normal drilling, and when heavy hoisting is to be done, connect the mud pump generator to the second draw works motor. This arrangement gives the same result as though one large draw works motor were used, with the generators connected in parallel for hoisting conditions.

### Three Generating Units

In some cases, it may be advisable to use three generator units, in which case one would normally drive the draw works motor for drilling, and the other two would be connected in parallel to supply power to the mud pump motor. For hoisting operations, the three generators could be connected in parallel to the draw works drive. Such an arrangement might work out to advantage for deep wells requiring large mud pumps, and large amounts of power for handling drill pipe.

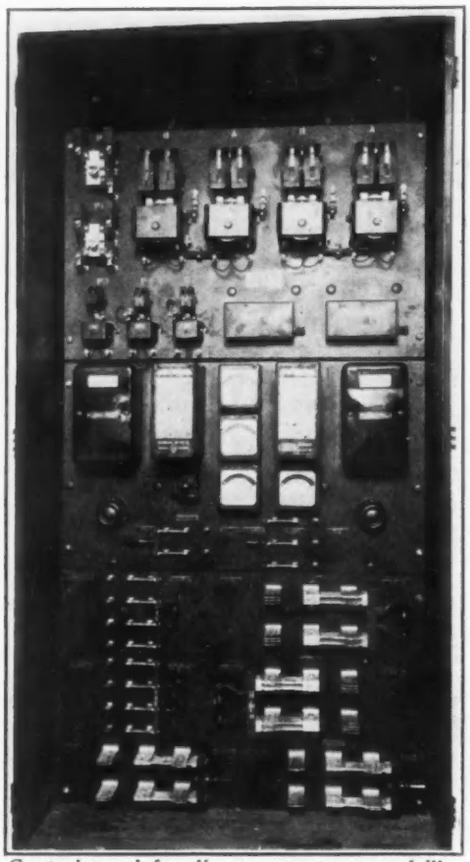
### Two-Speed Draw Works

It is apparent from the curves in Figure 2 that an equipment as outlined gives results very similar to those which would be obtained with a constant speed motor and a large number of gear ratios, that is, it gives high speed at light loads and permits very heavy loads to be handled at low speeds. This characteristic at once suggested the possibility of omitting the usual speed changes from the draw works and driving directly from the motor to the drum shaft.

A careful study has been made of this possibility and it was found that a motor which would give the necessary range in speed and torque would be capable of developing much in excess of the required horsepower output at normal speed. However, it was found that with one gear change in the draw works the output of the motor conformed very closely to the required values throughout the full speed range. It therefore appears that a two-speed draw works would be entirely practical where direct current drive is used, and the saving made in the cost of the draw works would offset to a certain extent the extra cost of the direct current equipment.

### Simplicity Essential

When considering an equipment of this kind, it should be borne in mind that simplicity of control is always desirable and every effort should be made to avoid unnecessary complications, which would add nothing to the utility of the drive and might result in trouble or delays due to improper switching or manipulation of the control equipment.



*Control panel for direct current rotary drilling equipment showing contactors for making normal operating connections and hand operated lever switches for emergency connections*

### Conclusion

In conclusion, it should be noted that while this type of drive is new, it has been thoroughly tried out under actual operating conditions in California and on the Gulf Coast of Louisiana and has demonstrated that the advantages predicted are fully realized and that it is an entirely practicable and successful drive for rotary drilling. In fact, the results obtained have been so favorable that a greatly extended use of the system, both with engine driven sets in remote locations and with motor driven sets where A C. power is available, is strongly indicated.

# Markets • Production • Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

## Nearly Half United States Production Is From Texas

Nearly half the oil produced in the United States last week came from wells in Texas where failure of the special legislative session to pass a new conservation law is apparently having the effect of still further encouraging disregard of proration rulings.

Oklahoma's executive order did not get into action early enough to make a serious difference in that state's total for the week, and it now becomes apparent that not so much of that state's output will be shut in—only Oklahoma City will be affected.

Net results are that the American Petroleum Institute report for the week ending August 8, shows production in the United States of 2,555,550 barrels, a net daily increase of 54,900 barrels. If that increase were 100 barrels greater it might indicate that the unit of measure was changing from barrels to tanks.

East Texas increased 56,700 barrels daily to 654,200 barrels daily for the period, which is the approximate increase for the state as well as for all of the United States.

Oklahoma is reported to have declined only 3850 barrels to 421,400 barrels daily. The week previous, without any executive closing of flush wells, the decline was 56,900 barrels. Of the latest total, Oklahoma City reports 84,540 barrels and Seminole 116,000 barrels. The shut-down of flowing wells in Oklahoma started Tuesday night, August 4, so that a half-week is included in the average. This indicates the probability that when the big flowing wells are shut in the water-producing wells are not so stringently prorated. At least immediate expected results in curbing Oklahoma are not in evidence.

In the meantime Governor Sterling of Texas is being asked to follow Oklahoma's Governor Murray in the example he has set of having wells shut down by armed forces. Nothing has happened in Oklahoma to stop the procedure, which encourages the idea that these tactics will work elsewhere. Kansas is getting the idea, based on the fact that Kansas refiners are paying more in freight, etc., for East Texas crude than they are paying for local crude.

Completions reported for the week show an increase of 17 over the previous week, but a decrease of 17 in the number of producing oil wells. Initial production reported declined 337,999 barrels, the second big drop in as many weeks, indicating smaller averages in East Texas where most of the completions are reported. New wells reported total 133, of which 110 were in Texas.

## Crude Runs Show Increase Gasoline Stocks Decreased

Approximately 95 per cent of the refineries operating in the United States reported to the American Petroleum Institute that for the week ending August 8, crude runs to stills were 17,077,000 barrels, or a daily average of 2,439,000 barrels. Stocks of gasoline reported at refineries August 8 were 35,881,000 barrels. Crude runs were increased as gasoline stocks decreased from the week previous when the daily average runs were shown as 2,381,000 barrels and stocks of gasoline 36,742,000 barrels. Details of runs and stocks for the week of August 1 with comparison of the previous week and last year, are shown on page 36.

On a Bureau of Mines basis, to compare with current production of crude oil, runs to stills for the week ending August 1 approximated 2,512,000 barrels daily, an increase of 60,000 barrels daily over the previous week, or approximately in balance with current production of crude.

## Mid-Continent Market Threatened By Partial Shut-Down in Kansas

Possibilities of a partial shut-down of Kansas oil fields came into the Mid-Continent crude oil complication Monday, August 10, when the public service commission of that state ordered crude oil buyers either to pay 60 cents a barrel for oil or "a hearing will be ordered to determine the nature and extent of a shut-down order in this state."

This communication is based on reports to the commission to the effect that Kansas refiners are now paying as much as 70 cents per barrel for oil from East Texas. The 60-cent price demanded for Kansas was asked on the basis that gathering oil in Kansas might cost 10 cents per barrel more than the cost in East Texas.

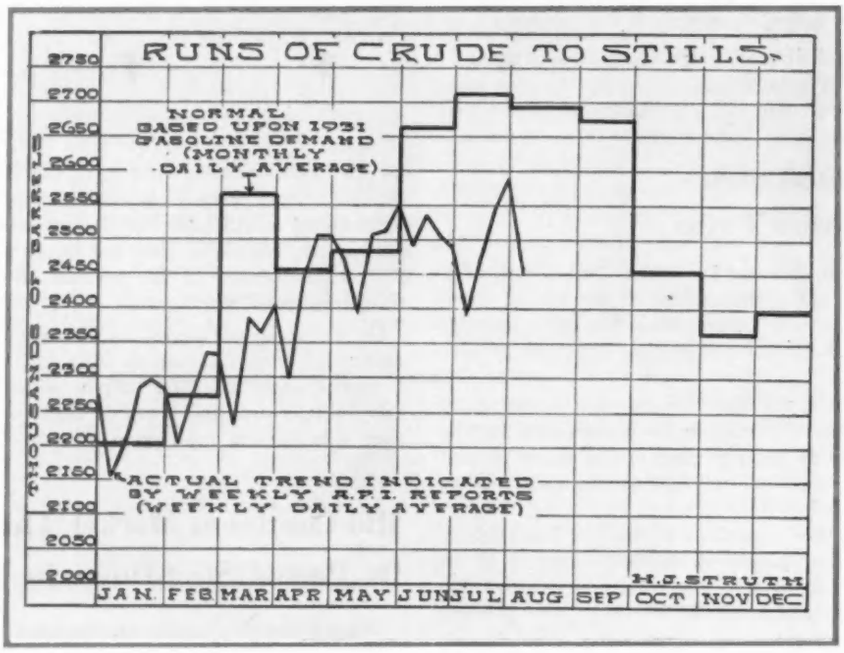
The peculiar angle of this situation is that the Kansas Public Service Commission bases its plea for higher prices on the fact that oil is being bought in East Texas and shipped into Kansas, while refiners in Oklahoma are reporting difficulty in getting oil in East Texas. Since the prorated fields of Oklahoma went under military restrictions last week, Oklahoma refiners have been active in their efforts to get an assurance of crude oil supplies in Texas. So far they have been able to get nothing more than contracts for sale. Delivery is the question they have not been able to solve.

In Oklahoma the crude price structure is still in deadlock. The demand for $1 a barrel has had no response, other than that of Bell Oil & Gas Company, which buys in southern Oklahoma, whose price is 10 cents above the schedule whose top price is 42 cents. Apparently major buyers are not going to move against the executive order by which the Oklahoma fields were put under restricted output.

Neither has Governor William H. Murray shown any signs of revoking his order. Major buyers can get crude oil supplies in East Texas and make delivery by pipe lines. For several months both Gulf Oil Corporation and Standard Oil Company of New Jersey have been pumping oil from East Texas through Oklahoma by using combinations of existing pipe lines. The Texas Company could by similar changes in pump station machinery deliver East Texas oil to the Texas-Empire line for pumping toward Chicago and Lawrenceville.

Champlin Refining Company of Enid has been credited with making connections which assure it an oil supply out of East

# MARKET SECTION




Texas. The H. F. Wilcox Oil & Gas Company is after East Texas oil for part of its requirements at Bristow.

Apparently, however, the greater number of independent refining concerns in Oklahoma have little faith in rail deliveries of sufficient crude oil out of East Texas. They are prone to seek crude oil from Oklahoma sources by trades among themselves and with major purchasers. Oklahoma refineries can get along with 200,000 barrels of oil daily. Output of the state last week was at the rate of 420,000 barrels daily. But the military shut-down was not in effect all week. Over a period the shut-down in Oklahoma is expected to reduce Oklahoma production to around 325,000 barrels. Because wells making water at Seminole are allowed to continue production, the drop in that area will not be so severe as was first inticipated.

Very little Seminole oil will be available to Oklahoma refining plants, since all the major buyers have pipe line systems there and own a big share of the production. Oklahoma City, which is owned largely by independent producers, under the shut-down will not produce more than 5000 barrels daily; so little is available from that source.

Most of the independent refining concerns have pipe line systems into the older pools, the settled production against which there is no order. But here the major purchasers also are entrenched with pipe line facilities and independent pro-

## Crude Runs to Stills, Gasoline Stocks and Gas and Fuel Oil Stocks

Week Ending August 1, 1931

(Figures in barrels of 42 gallons)

| District— | Potential Capacity (Daily) Total | Potential Capacity (Daily) Reporting | Per Cent | Crude Runs to Stills Total | Crude Runs to Stills Daily Average | Crude Runs to Stills Per Cent Operated | Gasoline Stocks (see note below) | Gas & Fuel Oil Stocks |
|---|---|---|---|---|---|---|---|---|
| East Coast | 633,700 | 633,700 | 100.0 | 3,169,000 | 452,700 | 71.4 | 6,103,000 | 10,362,000 |
| Appalachian | 149,600 | 137,400 | 91.8 | 759,000 | 108,400 | 78.9 | 1,282,000 | 1,432,000 |
| Ind., Ill., Ky. | 436,300 | 431,500 | 98.9 | 2,376,000 | 339,400 | 78.7 | 5,525,000 | 3,994,000 |
| Okla., Kans., Mo. | 485,700 | 435,200 | 89.6 | 1,933,000 | 276,100 | 63.4 | 2,726 000 | 5,241,000 |
| Texas | 838,200 | 765,400 | 91.3 | 3,522,000 | 503,200 | 65.7 | 6,650,000 | 10,696,000 |
| Louisiana-Arkansas | 233,100 | 230,500 | 98.9 | 1,276,000 | 182 300 | 79.1 | 992.000 | 2,882,000 |
| Rocky Mountain | 159,400 | 142,300 | 89.3 | 322 000 | 46,000 | 32.3 | 1,565,000 | 826,000 |
| California | 912,500 | 880,100 | 96.5 | 3,312,000 | 473,200 | 53.8 | *11,899,000 | 97,953,000 |
| Total Week Aug. 1 | 3,848,500 | 3,656,100 | 95.0 | 16,669,000 | 2,381,300 | 65.1 | 36,742,000 | 133,386,000 |
| Total Week July 25 | 3,848,500 | 3,646,100 | 94.7 | 17,599,000 | 2,514,100 | 69.0 | 37,289,000 | 132,793,000 |
| Total Aug. 2, 1930 | 3,686,400 | 3,528,400 | 95.7 | 17,197,000 | 2,456,700 | 69.6 | 44,100,000 | 139,641,000 |

**The Texas and Louisiana Gulf Coastal figures shown below are included above in the totals of their respective districts.**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Texas Gulf Coast | 532,500 | 531,500 | 99.8 | 2,766,00 | 395,100 | 74.3 | 5,524,000 | 7,445,000 |
| Louisiana Gulf Coast | 147,500 | 147,500 | 100.0 | 822,000 | 117,400 | 79.6 | 851,000 | 1,892,000 |

NOTE: In all the refining districts indicated except California, figures in this column represent gasoline stocks at refineries. In *California, they represent the total inventory of finished gasoline and engine distillate held by reporting companies wherever located within Continental United States—(stocks at refineries, water terminals and all sales distributing stations, including products in transit thereto).

# MARKET SECTION

## HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

| State— | Indicated Demand Third Quarter 1931 | Economic Limit Third Quarter 1931 | Daily Average Last Week | Daily Excess Last Week | Daily Average Since January 1 | Daily Excess Since January 1† |
|---|---|---|---|---|---|---|
| Arkansas | 63,000 | 60,000 | 38,300 | —21,700 | 46,788 | —9,212 |
| California | 525,000 | 487,500* | 505,000 | 17,500 | 528,872 | 33,072 |
| Kansas | 127,000 | 120,000 | 102,100 | —17,900 | 107,513 | —5,487 |
| Louisiana | 85,000 | 75,000 | 54,550 | —20,450 | 65,796 | —8,204 |
| Oklahoma | 593,000 | 550,000* | 421,400 | —128,600 | 520,173 | 13,473 |
| Texas | 850,000 | 797,000* | 1,233,750 | 436,750 | 864,215 | 152,515 |
| Balance of U. S. | 275,000 | 260,000 | 200,450 | —59,550 | 206,711 | —34,989 |
| Total | 2,528,000 | 2,349,500 | 2,555,550 | 206,050 | 2,340,068 | 141,168 |

*Allowable.
†Excess based on allowable to date.

ducers are in many instances under either moral or written contracts to deliver oil to major purchasers. When Prairie Oil & Gas Company was forced to withdraw as a crude oil buyer January 1, independent producers found only a few other outstanding purchasers willing to take over connections. In many of the old fields new lateral lines had to be provided. These major purchasers had to take protection against the loss of connections by asking for contracts before they could expend money to provide additional facilities.

In other instances the producers pooled the expense of new lines to the trunk systems of other purchasers.

Now that Oklahoma City is providing no oil and Seminole is giving up a reduced amount, these major purchasers are in need of the stripper oil, which they did not especially need when they took it last winter. So independent refiners will meet competition of several sorts when they seek connctions now held by major purchasers in the stripper fields.

If Oklahoma production finally comes down to only 350,000 barrels per day, there will not be sufficient oil for meeting all

## Cracked Gasoline Production

Week Ending Aug. 1, 1931

(Barrels of 42 gallons)

| District | Potential Cracking Capacity (Daily) Total | Reporting | Per Cent | Production Daily Total | Average |
|---|---|---|---|---|---|
| East Coast | 261,300 | 236,300 | 90.4 | 631,000 | 90 100 |
| Appalachian | 52,300 | 50,100 | 95.8 | 170,000 | 24,300 |
| Ind., Ill., Ky. | 330,400 | 312,400 | 94.6 | 583,000 | 83,300 |
| Okla., Kans., Mo. | 237,800 | 219,500 | 92.3 | 454,000 | 64,900 |
| Texas | 450,800 | 436,200 | 96.8 | 910,000 | 130,000 |
| Louisiana-Arkansas | 112,400 | 112,400 | 100.0 | 202,000 | 28,900 |
| Rocky Mountain | 99,100 | 97,600 | 98.5 | 103,000 | 14,700 |
| California | 180,800 | 180,800 | 100.0 | 252,000 | 36,000 |
| Total week Aug. 1 | 1,724,900 | 1,645,300 | 95.4 | 3,305,000 | 472,200 |
| Total week July 25 | 1,724,900 | 1,636,300 | 94.9 | 3,220,000 | 460,000 |
| Total Aug. 2, 1930 | 1,589,200 | 1,279,300 | 80.5 | 2,492,000 | 356,000 |
| **The Texas and Louisiana Gulf Coastal Figures Shown Below are included above in the totals of their respective districts.** | | | | | |
| Texas Gulf Coast | 352,400 | 347,400 | 98.6 | 730,000 | 104,300 |
| Louisiana G. Coast | 77,000 | 77,000 | 100.0 | 140,000 | 20,000 |

## Imports of Petroleum

(Barrels of 42 gallons)

| | Week Ended August 1 | Week Ended July 25 |
|---|---|---|
| AT ATLANTIC COAST PORTS— | | |
| Baltimore | 146,000 | 346,000 |
| Boston | ..... | 133,000 |
| New York | 693,000 | 623,000 |
| Philadelphia | 224,000 | 160,000 |
| Others | 72,000 | 214,000 |
| Total | 1,135,000 | 1,476,000 |
| Daily Average | 162,143 | 210,857 |
| AT GULF COAST PORTS— | | |
| Galveston District | ..... | 82,000 |
| New Orleans & Baton Rouge | 62,000 | ..... |
| Port Arthur & Sabine District | ..... | "A" 65,000 |
| Tampa | ..... | ..... |
| Total | 62,000 | 147,000 |
| Daily Average | 8,857 | 21,000 |
| AT ALL UNITED STATES PORTS— | | |
| Total | 1,197,000 | 1,623,000 |
| Daily Average | 171,000 | 231,857 |
| Daily Average Four Weeks Ended | 213,071 | 241,179 |
| **Distribution of Total Imports Is As Follows:** | | |
| Crude | 881,000 | "A" 664,000 |
| Gasoline | ..... | 612,000 |
| Gas Oil | 101,000 | ..... |
| Fuel Oil | 215,000 | 347,000 |
| Total | 1,197,000 | 1,623,000 |

"A"—Revised.

## California Oil Receipts

(Barrels of 42 gallons)

| | Week Ended August 1 | Week Ended July 25 |
|---|---|---|
| AT ATLANTIC COAST PORTS— | | |
| Baltimore | ..... | ..... |
| Boston | 37,000 | ..... |
| New York | 265,000 | 97,000 |
| Philadelphia | 117,000 | ..... |
| Others | 118,000 | ..... |
| Total | 537,000 | 97,000 |
| Daily Average | 76,714 | 13,857 |
| AT GULF COAST PORTS— | | |
| Total | ..... | ..... |
| Daily Average | ..... | ..... |
| AT ATLANTIC AND GULF COAST PORTS— | | |
| Total | 537,000 | 97,000 |
| Daily Average | 76,714 | 13,857 |
| Daily Average Four Weeks Ended | 54,107 | 47,357 |
| **Distribution of Total California Oil Receipts Is As Follows:** | | |
| AT ATLANTIC COAST PORTS— | | |
| Gasoline | 530,000 | 97,000 |
| Kerosene | 7,000 | ..... |
| Total | 537,000 | 97,000 |

# MARKET SECTION

## United States Daily Average Production

| 1930 | Oklahoma | Kansas | Texas (Outside Gulf Coast) | Gulf Coast | North Louisiana | Arkansas | Eastern States | Rocky Mountain | California | United States Daily Av. | United States Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| June | 665,550 | 133,600 | 668,300 | 210,500 | 40,300 | 56,900 | 135,750 | 84,600 | 598,000 | 2,593,500 | 77,806,900 |
| July | 594,750 | 121,600 | 652,350 | 209,400 | 40,550 | 55,400 | 137,200 | 98,350 | 610,450 | 2,520,050 | 78,121,200 |
| August | 558,850 | 115,650 | 646,400 | 206,600 | 41,500 | 55,100 | 128,550 | 106,000 | 611,250 | 2,470,900 | 76,597,600 |
| September | 558,900 | 116,550 | 606,550 | 200,750 | 40,150 | 53,550 | 121,400 | 110,650 | 604,900 | 2,413,400 | 72,402,205 |
| October | 542,100 | 114,850 | 609,500 | 194,850 | 41,500 | 52,800 | 121,750 | 104,000 | 590,800 | 2,372,150 | 73,536,350 |
| November | 491,550 | 111,400 | 579,350 | 190,100 | 44,050 | 52,000 | 116,400 | 101,950 | 601,200 | 2,288,000 | 68,639,150 |
| December | 459,300 | 105,550 | 533,400 | 189,300 | 43,000 | 51,100 | 112,200 | 100,500 | 587,450 | 2,181,800 | 67,636,500 |
| 1931 | | | | | | | | | | | |
| January | 452,000 | 106,350 | 511,050 | 188,850 | 41,100 | 50,700 | 110,300 | 96,700 | 535,700 | 2,092,750 | 64,874,450 |
| February | 473,750 | 114,450 | 523,700 | 185,600 | 43,950 | 49,950 | 109,800 | 100,100 | 527,300 | 2,128,600 | 59,600,450 |
| March | 531,900 | 110,550 | 585,000 | 177,950 | 40,250 | 47,550 | 108,800 | 95,400 | 528,100 | 2,225,500 | 68,990,850 |
| April | 543,650 | 109,250 | 723,050 | 185,850 | 39,050 | 47,000 | 111,500 | 95,500 | 527,350 | 3,382,200 | 71,465,750 |
| May | 561,950 | 107,400 | 767,200 | 185,950 | 39,200 | 46,650 | 111,250 | 97,500 | 534,150 | 2,451,250 | 75,975,950 |
| June | 556,850 | 103,150 | 828,250 | 170,100 | 36,500 | 44,900 | 108,950 | 97,950 | 520,300 | 2,466,950 | 74,009,750 |
| July 4 | 591,600 | 103,150 | 830,500 | 163,250 | 35,200 | 43,900 | 108,650 | 99,650 | 506,600 | 2,482,500 | 17,377,500 |
| July 11 | 632,450 | 101,450 | 850,650 | 159,800 | 33,750 | 43,500 | 107,750 | 97,300 | 523,000 | 2,544,650 | 17,812,550 |
| July 18 | 521,000 | 99,500 | 864,500 | 158,800 | 33,950 | 41,050 | 101,500 | 87,400 | 525,000 | 2,446,800 | 17,127,500 |
| July 25 | 482,150 | 97,400 | 952,950 | 156,500 | 33,450 | 40,600 | 105,100 | 94,900 | 523,900 | 2,486,950 | 17,408,650 |
| August 1 | 425,250 | 99,750 | 1,046,800 | 152,500 | 32,550 | 38,650 | 108,550 | 92,600 | 504,200 | 2,500,650 | 17,504,550 |
| August 8 | 421,400 | 102,100 | 1,102,100 | 154,650 | 31,450 | 38,300 | 105,800 | 94,650 | 505,000 | 2,555,550 | 17,888,850 |
| Increase | ..... | 2,350 | 55,300 | 2,150 | ..... | ..... | ..... | 2,050 | 800 | 54,900 | 384,400 |
| Decrease | 3,850 | ..... | ..... | ..... | 1,100 | 350 | 2,750 | ..... | ..... | ..... | ..... |

## Last Week's Daily Average Production by Districts

| TEXAS | Aug. 8 | Aug. 1 |
|---|---|---|
| Panhandle District | 54,950 | 54,350 |
| North Texas | 56,350 | 56,700 |
| West Central Texas | 23,000 | 26,150 |
| West Texas | 204,900 | 201,700 |
| East Central Texas | 53,050 | 52,350 |
| East Texas | 654,200 | 597,550 |
| Southwest Texas | 55,750 | 58,000 |
| Texas Gulf Coast | 131,550 | 130,700 |
| Total Texas | 1,233,750 | 1,177,500 |
| OKLAHOMA | 421,400 | 425,250 |
| CALIFORNIA | 505,000 | 504,200 |
| KANSAS | 102,100 | 99,750 |

| LOUISIANA | Aug. 8 | Aug. 1 |
|---|---|---|
| North Louisiana | 31,450 | 32,550 |
| Louisiana Gulf Coast | 23,100 | 21,800 |
| Total Louisiana | 54,550 | 54,350 |
| ARKANSAS | 38,300 | 38,650 |
| MOUNTAIN STATES | | |
| Wyoming | 39,900 | 36,650 |
| Montana | 8,000 | 8,050 |
| Colorado | 3,950 | 4,200 |
| New Mexico | 42,800 | 43,700 |
| Total Mountain States | 94,650 | 92,600 |
| EASTERN STATES | 105,800 | 108,550 |
| TOTAL UNITED STATES | 2,555,550 | 2,500,650 |

## Summarized Review of Field Results

| State— | Completions This week | Completions Last week | Oil Wells This week | Oil Wells Last week | Gas Wells This week | Gas Wells Last week | Failures This week | Failures Last week | Initial Prod. This week | Initial Prod. Last week |
|---|---|---|---|---|---|---|---|---|---|---|
| Arkansas | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| California | 5 | 10 | 3 | 7 | 0 | 0 | 2 | 3 | 1,100 | 40,975 |
| Illinois | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| Indiana | 0 | 4 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 |
| Kansas | 13 | 9 | 10 | 4 | 2 | 3 | 1 | 2 | 15,615 | 445 |
| Kentucky | 5 | 2 | 2 | 1 | 0 | 1 | 3 | 0 | 150 | 225 |
| Louisiana | 2 | 6 | 1 | 0 | 1 | 1 | 0 | 5 | 2,150 | 0 |
| Michigan | 4 | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 1,500 | 0 |
| Mississippi | 1 | 3 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 |
| New York | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| Ohio | 22 | 13 | 2 | 4 | 13 | 6 | 7 | 3 | 21 | 62 |
| Oklahoma | 13 | 13 | 9 | 5 | 3 | 3 | 1 | 5 | 24,485 | 43,630 |
| Pennsylvania | 1 | 4 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 15 |
| Texas | 119 | 110 | 80 | 102 | 3 | 1 | 36 | 7 | 431,940 | 729,600 |
| West Virginia | 12 | 5 | 0 | 1 | 11 | 4 | 1 | 0 | 0 | 8 |
| Total | 202 | 185 | 108 | 125 | 42 | 28 | 52 | 32 | 476,961 | 814,960 |
| Increase this week | | 17 | | .. | | 14 | | 20 | ..... | |
| Decrease this week | | .. | | 17 | | .. | | .. | 337,999 | |

## Comparison of Permits Granted for New Wells

| State— | Week Ending Aug. 7 | Previous week | This week 1930 | Total this month | This month 1930 | Total this year | Total this date last year | 1930 year total |
|---|---|---|---|---|---|---|---|---|
| Arkansas | 1 | 0 | 0 | 1 | 6 | 24 | 63 | 108 |
| California | 7 | 4 | 17 | 7 | 101 | 246 | 506 | 922 |
| Louisiana | 4 | 5 | 22 | 4 | 87 | 203 | 669 | 948 |
| Kansas | 4 | 8 | 13 | 4 | 93 | 287 | 657 | 944 |
| Oklahoma | 7 | 4 | 51 | 7 | 216 | 558 | 2,061 | 2,830 |
| Texas | 110 | 105 | 89 | 110 | 605 | 3,594 | 5,011 | 7,052 |
| Total | 133 | 126 | 199 | 133 | 1,108 | 4,912 | 8,967 | 12,804 |

# MARKET SECTION

demands. Local refining plants can use 200,000 barrels daily. Stanolind Crude Oil Purchasing Company, Sinclair Refining Company, The Texas Company, Gypsy Oil Company, Shell Petroleum Corporation and Carter Oil Company can not be supplied from 150,000 barrels daily.

Several efforts have been made to purchase oil from Prairie Oil & Gas Company, whose stored reserve is the highest in the Mid-Continent, but the company has shown no disposition to liquidate stored oil at prevailing prices. Independent refining concerns are not as a class pressed for crude oil supplies. A few need oil immediately. Most of them have sufficient for a few weeks. But all are anxious to know where more oil can be had and so far they have no assurance.

Meanwhile prices of refined products continue to move upward. U. S. motor gasoline is currently quoted at four cents a gallon. Several concerns decline to quote prices since they are confident that the refined market will continue to move upward.

## California Market Reflects Lowered Production Efforts

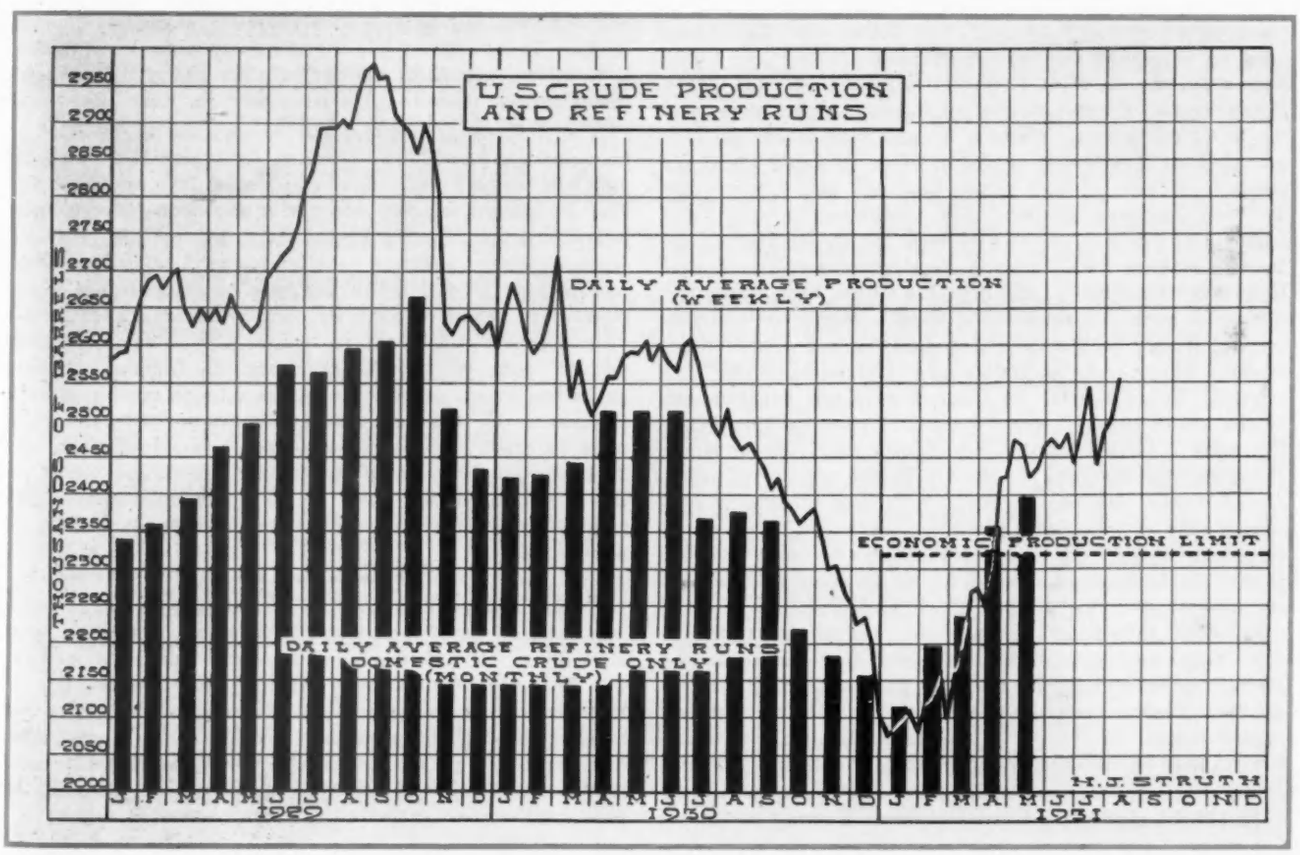
One of the brightest indications for the future lies in the efforts of various agencies to hold production down to an economic level until conditions improve and until stocks are reduced to a sensible figure. State production is not much above 500,000 barrels, against an allowable of 487,500. Santa Fe Springs and Playa del Rey are the only oil fields which have excesses of any consequences, but other fields will bear watching. Kettleman Hills has been producing slightly less than its allowable—something unusual and important.

The movement of petroleum products from California has been a source of considerable worry, but not all commodities have shown a sharp decrease. The demand for California gasoline has been disappointing this summer, due to the huge oversupply in other districts. The long water haul has influenced some of the largest Atlantic seaboard buyers to shop around for Mid-Continent and Gulf Coast gasoline. The margin of profit has been extremely small, where gasoline has been shipped through the Panama Canal to compete with less remote producing centers.

California is in reality the victim of her own mistakes, despite the present low producing levels. Overproduction during 1928-1929 so weakened the market structure that the largest purchasing companies run away from the slightest excesses. Three years ago, these leading companies so dominated the situation that they bought all surplus crude to control the market of both the oil and the refined products. Principal purchasers now have stocks which are top-heavy. This allows some of the smaller purchasers and refiners to obtain oil and convert it into cheap gasoline.

There has been much "loose" oil during the past year, and even at this time it is not difficult to purchase quantities of oil at, or near, the regular posted prices. The higher posted prices have increased the supply of oil to the small buyer in at least two fields, where the producers were reluctant to sell their production at less than 35 cents under the old schedule.

Local gasoline prices are slightly weaker, with the posted service station price holding at 16 cents in the Los Angeles district. There has not been much demand for fuel oil, but prices remain unchanged at 55-65 cents.



# MARKET SECTION

## East Texas Crude Moving To Oklahoma by Tank Cars

Tulsa, Okla.—Transportation of East Texas crude now being purchased by independent refiners in Oklahoma, Kansas and scattered points in the Middle West as a substitute for supplies cut off in Oklahoma by Governor Murray's military forces must be confined to tank car shipments. Trunk lines of major companies engaged in handling East Texas crude to the above refining centers are either loaded to capacity, or the policy of the owners is to evade common carrier crude shipments.

Prairie Pipe Line Company is known to be eliminated as a possible transportation source for these refiners because its entire capacity is now in service and building, for north bound East Texas crude movements having been booked by Sinclair interests. Gulf Pipe Line Company is moving a large quantity of East Texas crude over its trunk line across the upper Mid-Continent to refineries of Gulf Refining Company in the Middle West and East, but refrains from handling outside oil in its lines as a general rule, except where crude exchanges are made. No aid can be expected by these plant owners by way of Humble Pipe Line Company, Standard Pipe Line Company (Louisiana), Oklahoma Pipe Line Company and Ajax Pipe Line Company.

Magnolia Pipe Line Company's system from Oklahoma into Texas is not equipped to handle East Texas crude to the north from Corsicana as nearly 1,000,000 barrels of Oklahoma crude was moved into Texas during July, and the company has common carrier contracts for other concerns calling for delivery to Beaumont terminals.

Movement of East Texas crude into Oklahoma is taking place on a large scale through The Texas Pipe Line Company to be routed via the Texas-Empire Pipe Line Company's system to Middlewestern refineries of The Texas Company and Empire (Doherty) interests, joint owners of the latter trunk line. There is no pipe line space available on the East Texas end of this hookup available for other shippers because of The Texas Company and Empire Gas & Fuel Company utilizing the maximum capacity, and augmenting the movement with tank car shipments to Dallas. In making East Texas crude shipments to the Texas-Empire system, the Texas Pipe Line Company routes the oil south from the field via a 10-inch carrier to Douglas station, thence northwest via an eight-inch carrier to Corsicana, then north to Dallas and Oklahoma. The line capacity from Douglas to Corsicana is not sufficient to handle crude requirements from East Texas, so The Texas Company is buying and having shipped via tank cars about 15,000 barrels of crude daily into Dallas, where the oil is placed in the line and boosted north into Oklahoma. A freight rate of nine cents per 100 pounds applies on crude shipments from East Texas into Dallas in tank cars, or about 28 cents per barrel. The oil is purchased for an average price of 15 cents per barrel loaded on cars.

Stanolind Pipe Line Company has deferred entrance into East Texas with a trunk line extension from Corsicana, or Mexia, but is receiving at the latter point about 5000 barrels of East Texas crude daily via Humble Pipe Line Company's system for storing in the Mexia district. These deliveries may be increased when Humble Pipe Line Company Completes new loops on its line from East Texas to Groesbeck (Mexia district). A tariff of about 20 cents per barrel is paid for gathering and delivering East Texas crude to the Mexia tanks.

Stanolind Oil & Gas Company was reported to have began moving about 10,000 barrels of East Texas crude daily in tank cars to the Wood River refinery of Standard Oil Company of Indiana late last week. The former was seeking about 700 tank cars to put into crude service out of East Texas toward the end of the week. Heretofore, East Texas crude production and purchases by Stanolind Oil & Gas Company have been consigned direct in tank cars to the Destrehan, Louisiana, plant of Mexican Petroleum Corporation, or routed via Texas Gulf Coast points, thence in barges to Destrehan.

Sinclair Refining Company will utilize the 22,500 barrel additional capacity being given Prairie Pipe Line Company's trunk line across Central Texas by the laying of 157 miles of eight-inch line parallel to an existing eight-inch carrier from Mexia district to Hensley station, Jack County, Texas. The capacity north from Hensley into Oklahoma is 65,000 barrels daily, while maximum shipments from Mexia to Hensley upon the completion of the new unit will range from 45,000 to 50,000 barrels daily. Sinclair-Texas Pipe Line Company delivers East Texas crude to Prairie interests at Colonels station, near Mexia, and during the past week averaged slightly more than 60,000 barrels daily. A large quantity of this oil was moved north and also south to Sinclair Refining Company's plant near Houston, while the remainder went into tank farms near Mexia. Sinclair interests have no appreciable volume of crude stocks to draw upon, and because of the loss of Oklahoma oil supplies Sinclair Refining Company is facing a temporary scarcity of crude for its Oklahoma, Kansas and middle western plants. Contrary to published reports the Sinclair interests will not be able to accumulate any great quantity of East Texas crude while the shutdown order in Oklahoma is in effect because of the company's refinery requirements being greater than its oil movement from East Texas.

A rush order for about 800 tanks cars to be used in transporting East Texas crude to its upper Mid-Continent and mid-western refineries was placed last week by Sinclair Refining Company in order to augment deliveries now being made via Prairie Pipe Line Company. A great difference in transportation rates exists, as Sinclair-Prairie interests have a joint trunk line rate of 35 cents per barrel from East Texas to Sand Springs, Oklahoma, and Coffeyville, Kansas; 50¾ cents to Kansas City, station, Kansas; and 66 cents to East Chicago station, Indiana. A field gathering charge of 10 cents per barrel also applies on such shipments. A tank car rate of 25 cents per 100 pounds applies on crude shipments from East Texas to Omaha, and 20 cents per 100 pounds to Roxana and Wood River, Illinois, but to obtain this rate shippers must use 10,000-gallon cars, or pay for a minimum weight load of 74,000 pounds per car.

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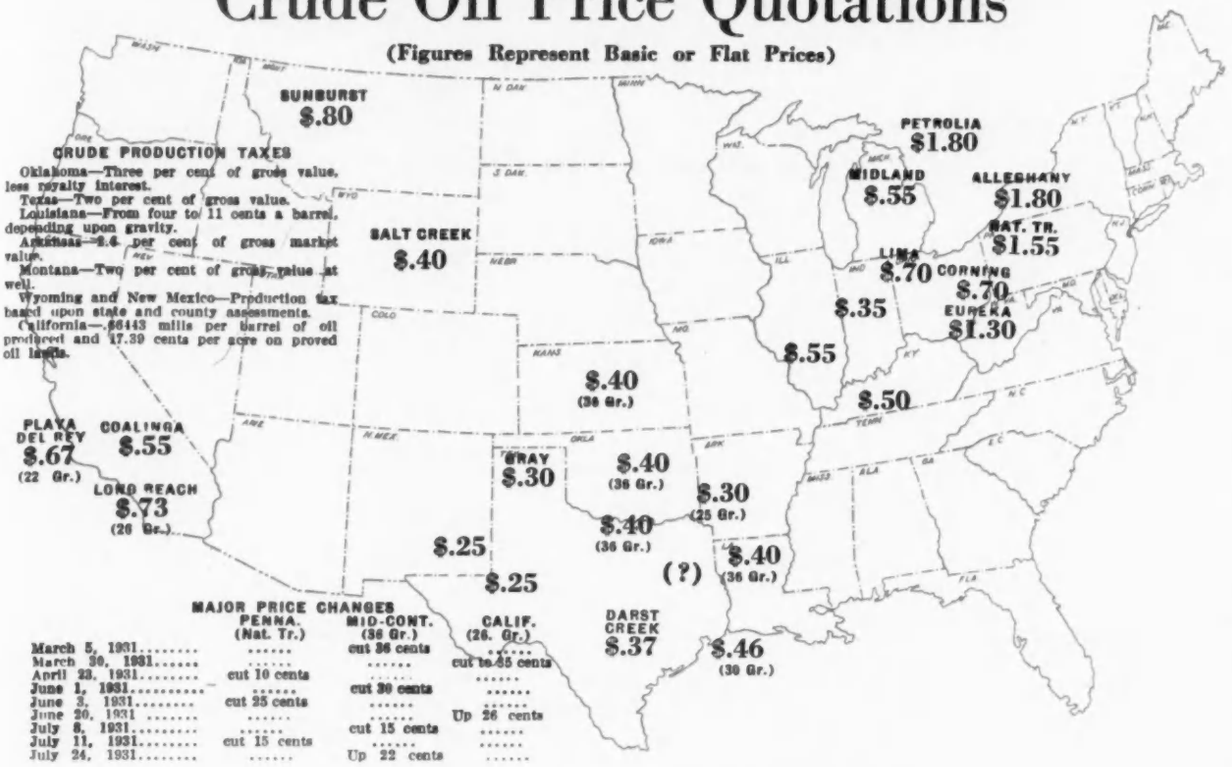
Dallas, Texas.—Atlantic Pipe Line Company began welding work on its 10-inch trunk line system, extending from East Texas to tank farm and tanker terminals of Atlantic Oil Producing Company at Atreco, near Beaumont. Atlantic interests are using field storage, facilities of other trunk lines, and also tank cars for handling its production and purchased oil in East Texas while awaiting the completion of the line, which will require about 182 miles of pipe, exclusive of gathering system.

# Crude Oil Price Quotations

**(Figures Represent Basic or Flat Prices)**




## Official Postings and Differentials

***(Revised to August 11, 1931)***

**California:** (Effective June 19, 1931).

**Signal Hill, Seal Beach and Alamitos Heights:** 14 to 22.9 gravity 65 cents; 23 gravity, 67 cents with differential of two cents for each degree upward. Top price for Signal Hill, 30 gravity, 81 cents; top price Seal Beach and Alamitos Heights, 27 gravity, 75 cents.

**Huntington Beach:** 14 to 21 gravity, 65 cents; 22 gravity, 66 cents with differential of two cents for each degree upward. Top price, 27 gravity, 76 cents.

**Inglewood:** 14 to 19.9 gravity 65 cents; 20 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity 76 cents.

**Playa Del Rey:** 19 to 20.9 gravity 65 cents with differential of one cent for each degree upward. Top price, 25 gravity, 70 cents.

**Olinda and Brea Canyon:** 14 to 19.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents; 22 gravity 68 cents with differential of two cents for each degree upward. Top price, 28 gravity, 80 cents.

**Coyote Hills:** 14 to 22.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents with differential of two cents for each degree upward. Top price, 28 gravity, 79 cents.

**Santa Fe Springs:** 24 to 26.9 gravity 65 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 73 cents; 30 gravity 75 cents; 31 gravity 78 cents; 32 gravity 80 cents; 33 gravity 83 cents; 34 gravity 85 cents; 35 gravity and above 87 cents.

**Whittier, La Habra and Montebello;** 65 cents a barrel.

**Torrance:** 14 to 21.9 gravity 65 cents with differential of one cent for each degree to 25 gravity and two-cent differential for 25 gravity. Top price, 25 gravity, 70 cents.

**Richfield:** 14 to 20.9 gravity 65 cents; 21 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity, 74 cents.

**Elwood:** 33 gravity 79 cents; 34 gravity 81 cents with differential of three cents for each degree upward. Top price, 36 gravity, 87 cents.

**Newhall, McKittrick and Kern River:** 55 cents a barrel.

**Midway-Sunset, Elk Hills and Buena Vista Hills:** 14 to 21.9 gravity 55 cents; 22 gravity 56 cents; 23 gravity 58 cents; 24 gravity 61 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 74 cents; 30 gravity 76 cents.

**Lost Hills:** 14 to 20.9 gravity 55 cents; 21 gravity 57 cents; 22 gravity 59 cents; 23 gravity 60 cents; 24 gravity 62 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 67 cents; 28 gravity 69 cents; 29 gravity 71 cents; 30 gravity 72 cents.

**Coalinga:** 14 to 24.9 gravity 55 cents; 25 gravity 57 cents.

**Wheeler Ridge:** 55 cents a barrel.

**Athens, Dominguez and Rosecrans:** 24 to 24.9 gravity 69 cents with differential of two cents for each degree upward. Top price, 34 gravity, 89 cents a barrel.

**Oklahoma-Kansas-North Texas:** (Effective July 24, 1931)

Flat Prices: Below 36 gravity 35 cents a barrel; 36 gravity and above 40 cents a barrel.

Gravity Scale Prices: Below 29 gravity 30 cents a barrel with differential of 1 cent for each degree beginning with 29 and ending with 40 gravity and above. Top price 42 cents a barrel.

**Texas Panhandle:** (Effective July 24, 1931).

**Gray County** 30 cents flat.

**Carson and Hutchinson County** oil 27 cents flat.

**West Texas:** (Effective July 24, 1931)

**Crane, Upton, Crockett, Ector, Howard, Glasscock, Pecos and Winkler Counties, Texas, and Lea County, New Mexico,** 25 cents flat.

**Southwest Texas:** (Effective July 24, 1931)

**Refugio heavy oil** 44 cents a barrel.

**Refugio light oil**—same as Gulf Coast (see below).

**Gulf Coast:** (Effective July 24, 1931)

**Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble and Refugio Light:** Below 25 gravity 40 cents, with differential of 1 cent for each degree beginning with 25 gravity and ending with 35 and above. Top price, 51 cents a barrel.

**Mirando:** 44 cents; **Salt Flat:** 37 cents; **Darst Creek:** 37 cents; **Pettus:** 50 cents; **Markham:** 25 cents.

**North Louisiana and Arkansas:** (Effective July 24, 1931)

**Caddo, Homer, Haynesville, Bull Bayou, Sabine, Crichton, DeSoto, El Dorado, Cotton Valley, Sarepta, Carterville:** Below 29 gravity 30 cents with differential of 1 cent for each degree beginning with 29 gravity and ending with 40 and above. Top price 42 cents a barrel.

**Smackover:** 30 cents; **Urbana:** 20 cents.

**Rocky Mountain States:** (Effective July 25, 1931)

**Salt Creek:** Same as Mid-Continent—below 36 gravity 35 cents, 36 gravity and above 40 cents.

**Elk Basin and Grass Creek:** 65 cents; **Big Muddy:** 45 cents; **Lance Creek:** 80 cents; **Rock Creek:** 50 cents; **Sunburst:** 80 cents; **Mule Creek:** $1.05; **Rex Lake:** 95 cents; **Osage:** 35 cents; **Cat Creek:** $1.10; **Pondera:** $1.30; **Hogback, New Mexico:** $1.25.

**Eastern States:** (Effective July 25, 1931)

**Lima:** 70 cents; **Indiana:** 35 cents; **Illinois:** 55 cents; **Princeton:** 55 cents; **Wooster:** 73 cents; **Western Kentucky:** 50 cents.

**Pennsylvania:** (Effective July 29, 1931). **Bradford District:** $1.80; **National Transit oil:** $1.55; **Southwest Pennsylvania Pipe Line oil:** $1.40, **Eureka Pipe Line oil:** $1.30; **Buckeye Pipe Line oil:** $1.15; **Corning crude:** 70 cents.

**Michigan:** (Effective July 24, 1931). **Midland:** 55 cents a barrel. **Muskegon:** Same posting as Mid-Continent: 35 cents to 40 cents a barrel. (Effective July 24, 1931).

**Canada:** (Effective July 24)

**Petrolia:** $1.75; **Oil Springs:** $1.82.

# Summary of Field Operations, July, 1931

▼ ▼ ▼

## Recapitulation—United States

| State— | Completions July | Total Completions Jan.-July | Producers July | Total Producers Jan.-July | Gas Wells July | Total Gas Wells Jan.-July | Failures July | Total Failures Jan.-July | Initial Production Oil July | Initial Production Total Oil Jan.-July | Initial Production Gas* July | Initial Production *Total Gas Jan.-July | Total Production July | Total Production Jan.-July |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oklahoma | 64 | 764 | 25 | 364 | 12 | 130 | 27 | 270 | 174,845 | 1,548,605 | 54 | 319¾ | 16,367,100 | 110,471,850 |
| Kansas | 35 | 279 | 15 | 125 | 10 | 71 | 10 | 83 | 12,905 | 103,485 | 177¾ | 911¾ | 3,099,550 | 22,848,350 |
| Texas (outside Gulf Coast) | 430 | 2,778 | 340 | 1,838 | 8 | 138 | 82 | 802 | 2,464,292 | 10,467,666 | 215¼ | 2,931 | 28,279,500 | 146,986,150 |
| Gulf Coast | 37 | 434 | 12 | 219 | 1 | 8 | 24 | 207 | 4,985 | 133,840 | 25 | 210½ | 4,893,700 | 37,899,050 |
| North Louisiana | 16 | 182 | 5 | 42 | 5 | 53 | 6 | 87 | 1,557 | 17,167 | 20 | 1,081¾ | 1,042,950 | 8,280,450 |
| Arkansas | 1 | 61 | 0 | 27 | 0 | 8 | 1 | 26 | 0 | 2,621 | 0 | 65½ | 1,283,550 | 9,929,550 |
| Eastern States | 212 | 1,840 | 51 | 514 | 104 | 823 | 57 | 503 | 1,034 | 21,447 | 205 | 1,560¼ | 3,335,350 | 23,260,250 |
| Rocky Mountain | b | b | b | b | b | b | b | b | b | b | b | b | 2,927,100 | 20,482,400 |
| California | 26 | 239 | 21 | 206 | .. | 0 | 5 | 33 | 60,495 | 272,825 | 0 | 0 | 16,054,900 | 111,815,800 |
| Total | 821 | 6,577 | 469 | 3,335 | 140 | 1,231 | 212 | 2,011 | 2,720,113 | 12,567,656 | 697 | 7,080½ | 77,283,700 | 491,973,850 |

*Millions of cubic feet.
(b) Not available.

## Field Activities Show General Decline in July

A general reduction in field activities throughout July as compared with June is reflected in the recapitulation of United States operations shown on this page. July's total of 821 completions, compared with 987 for June, reflects even more strongly the curbed status of drilling when the fact is considered that many of the 212 failures of the month do not represent projects which failed after trial to obtain commercial production but do represent drilling projects which were discontinued prematurely.

Along with the decrease in completions and the attendant decrease in the number of producers, initial production for July totaled 2,720,113 barrels as compared with 2,999,552 barrels for June. June's initial, incidentally, was lower than May's. Producing wells completed in July numbered 469; those completed in June, 593.

The critical area of East Texas, believed by many to be headed for a daily production figure in excess of 1,000,000 barrels, declined both in the number of completions and in the total initial oil in July. June's completions for the area totaled 368, while those for July totaled 321. July's initial oil from the area was roughly 238,000 barrels less than that of June.

Notwithstanding the above figures, the total oil yielded by domestic fields during the month was 77,283,700 barrels, representing an increase of 3,396,350 barrels over the amount recovered in June, a fairly practical index to the longevity of flush production for the month in the critical area. Such index becomes more applicable in the face of the fact that every oil producing district, with the exception of that major territory known as "Texas outside the Gulf Coast," showed a decline in daily average output.

### Past Twelve Months

The record for the past 12 months is an interesting study for comparative purposes, the following table giving the field statistics for all states:

| Month— | Completions | Producers | Gas wells | Failures | Initial Prod. |
|---|---|---|---|---|---|
| January, 1930 | 1,918 | 1,142 | 295 | 480 | 685,325 |
| February | 1,463 | 881 | 201 | 381 | 990,869 |
| March | 1,544 | 794 | 220 | 530 | 665,535 |
| April | 1,702 | 1,023 | 180 | 499 | 776,024 |
| May | 1,973 | 1,125 | 228 | 611 | 771,977 |
| June | 1,679 | 950 | 223 | 506 | 580,997 |
| July | 2,144 | 1,167 | 306 | 671 | 845,068 |
| August | 1,837 | 930 | 310 | 597 | 1,160,055 |
| September | 1,165 | 619 | 208 | 338 | 833,109 |
| October | 1,199 | 587 | 245 | 367 | 615,002 |
| November | 1,253 | 644 | 217 | 392 | 901,046 |
| December | 1,479 | 650 | 310 | 519 | 979,111 |
| January, 1931 | 1,156 | 519 | 211 | 426 | 796,850 |
| February | 815 | 348 | 192 | 275 | 459,727 |
| March | 819 | 347 | 153 | 319 | 704,526 |
| April | 905 | 479 | 164 | 262 | 1,858,297 |
| May | 1,095 | 594 | 212 | 289 | 3,075,384 |
| June | 987 | 593 | 160 | 234 | 2,999,552 |
| July | 821 | 469 | 140 | 212 | 2,720,113 |

*—Rocky Mountain figures not available.

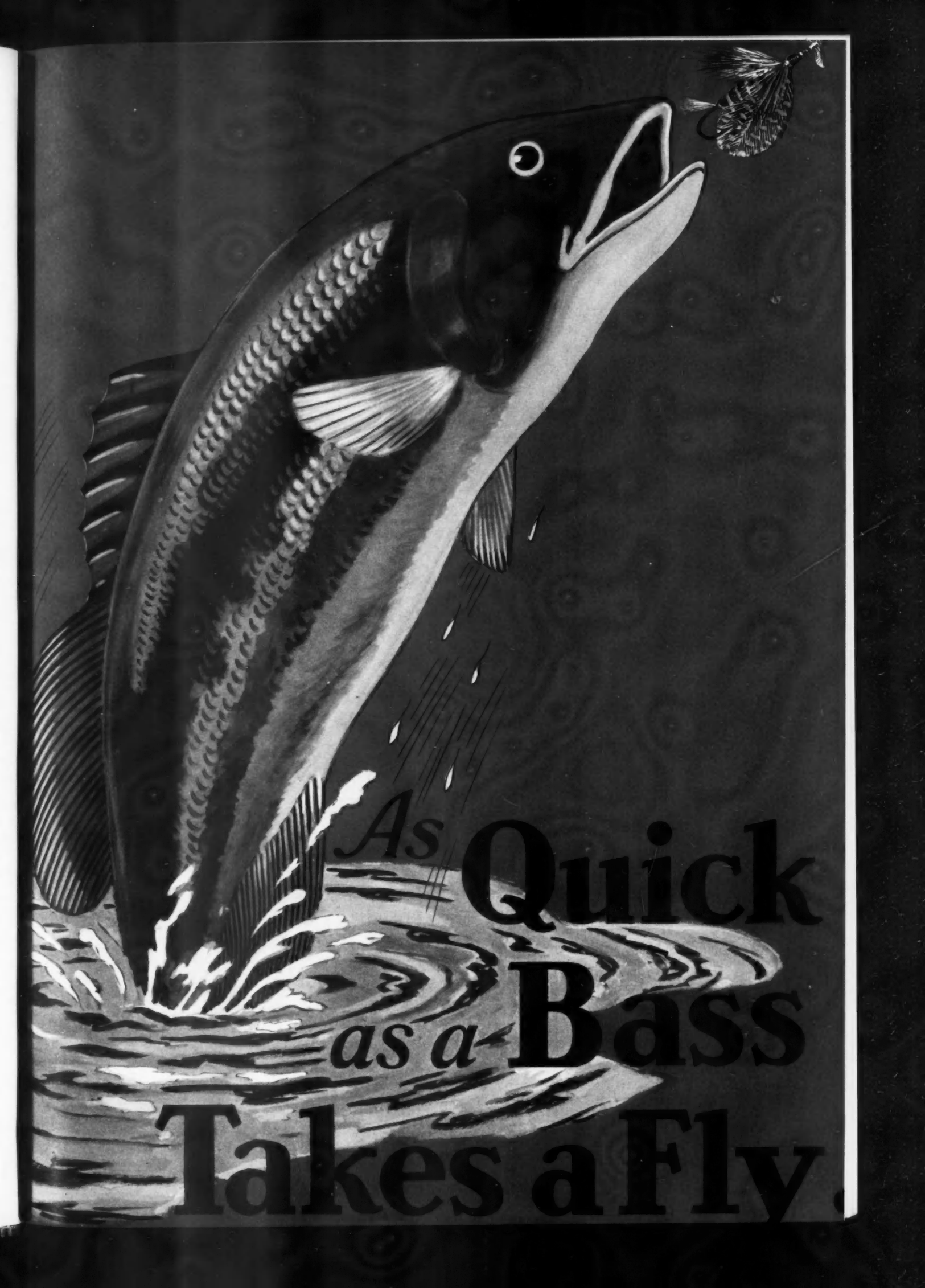
### EAST TEXAS COMPLETIONS AND PRODUCTION

| County or Field— | Total Completions Jan.-July | Total Initial Production Jan.-July | Total Production Jan.-July |
|---|---|---|---|
| Gregg | 32 | 256,500 | ..... |
| Joiner-Bradford | 389 | 2,210,065 | 15,576,300 |
| Kilgore | 507 | 4,455,740 | 20,324,100 |
| Longview | 242 | 2,106,600 | 8,797,500 |
| Rusk | 162 | 965,036 | ..... |
| Total | 1,332 | 9,993,941 | 44,697,900 |

### United States Production

| State— | Total Production July* | Daily Average July* | Daily Average June |
|---|---|---|---|
| Oklahoma | 16,367,100 | 527,971 | 552,150 |
| Kansas | 3,099,550 | 99,986 | 103,050 |
| Texas (Outside Gulf Coast) | 28,297,500 | 912,242 | 828,950 |
| Gulf Coast | 4,893,700 | 157,851 | 170,100 |
| North Louisiana | 1,042,950 | 33,643 | 36,550 |
| Arkansas | 1,283,550 | 41,405 | 44,900 |
| Eastern States | 3,335,350 | 107,592 | 108,950 |
| Rocky Mountain | 2 927,100 | 94,422 | 97,650 |
| California | 16,054,900 | 517,900 | 520,600 |
| Total | 77,283,700 | 2,493,022 | 2,462,900 |

*—Preliminary—subject to revision.


As Quick
as a Bass
Takes a Fly.

# In a Flash — *It's in Action!*

A STRIKE—a tug—a fish that's fine! A fly—a dart—a tustle—and a big-mouth black bass that makes a fisherman thrill, and puts the sport in sportsmanship!

Just as quick as a bass takes a fly, the Safety Valve on the B. S. & B. PERFECTION Vapor Pressure Tank functions. Should the pressure exceed 16 ounces, which is more than the maximum developed by the sun rays on ordinary quiet crude, or should the vacuum exceed 2 ounces, also the maximum under ordinary circumstances, this safety valve operates automatically.

This combination thief hole cover and Pressure-Vacuum Valve is of rugged construction, and though made of carefully machined, fool-proof parts, each of which is qualified by laboratory tests and field experiments to function for its specific purpose, it is built to withstand *the abuses* to which it will be put *under actual field use*. This safety valve is regular equipment on all the B. S. & B. Vapor Pressure Tanks, either made of steel or wood.

*The B. S. & B. Thief Hole Pressure Vacuum Valve* is one of those "trifles" that make PERFECTION. This view shows the valve open and serving as a thief hole.

## B.S.&B. Perfection Vapor Pressure TANKS

But the B. S. & B. Thief Hole Pressure Vacuum Valve is only one of the features of these tanks that protect your crude. Each Tank is more than a mere shell. It is built like a skyscraper, and is *structurally correct*. The copper-bearing steel, the heat treated bolts of 120,000 lbs. tensile strength, the flange type construction whereby there are four thicknesses of metal plus a special packing in the seams of the shell, the angle iron tie rods bolted to heavy gussets, the sloping segmental roof, large cleanout box, and other factors are all features of these tanks.

## *"Service on the Dot" — "Service on the Spot"*

Back of each B. S. & B. Tank, there is a complete organization manufacturing, distributing and erecting. There is a modern Fabricating Plant, centrally located at Kansas City, fifty Branch Stations where complete stocks are maintained, a fleet of trucks and service cars, and many trained erection crews which assures prompt delivery and erection. Speed is our creed, though backed by experience and thoroughness. The trained tank crews employed are protected by compensation insurance, and each job by public liability insurance. Thus action and satisfaction in every regard.

## Wood Tanks

For use in the fields of Southwest Texas and Panhandle where hydrogen sulphide gas fumes corrode all metals, the B. S. & B. Vapor Pressure Tank is built of redwood and equipped with B. S. & B. Thief Hole Pressure Vacuum Valve.

Thus, *"The Tank that Defies Corrosion."*

*We've a catalog and other literature concerning the B. S. & B. PERFECTION Vapor Pressure Tanks—better still, a man near you now. Our story, told either way, will prove to be a tale of profits for you. Please address Dept. X-20.*

PRODUCTS B S&B SERVICE

**Black Sivalls & Bryson** INC.

BARTLESVILLE - OKLAHOMA

Our Watchword QUICK SERVICE

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(*Continued from page* 14)

carrier shall become a common purchaser, and shall purchase oil offered without discrimination as between persons or fields in this state. The question of reasonableness is to be determined by the commission, with consideration given to production and age of the wells and all other proper factors. No discrimination is permitted between crude of a similar quality in favor of its own production, but shall take such oil tendered as this amount bears to the total of the field. The commission may relieve a common purchaser from buying oil of an inferior grade.

Section 8a declares common carriers taking natural gas, casinghead or residue gas, are also declared common purchasers, and are prevented from discrimination in the same manner as purchasers of crude oil.

Section 8aa requires that all persons who may later fall under the definition in Section 8 are also defined as common purchasers, whether they are at the present time or not.

Section 8b declares that the commission shall enforce this act, defining the distance that gathering lines shall be extended, and any other necessary regulations.

Section 8bb provides that nothing in this act shall in any manner permit the violation of the anti-trust laws of this state.

Section 8c makes the transportation of crude oil produced in violation of the state laws illegal.

Section 9 names the railroad commission as administrator of this act.

Section 10 permits any person or the attorney general to apply for a hearing on any violation of this act, and the commission is given the right to conduct such hearing, after due notice.

**Penalty Fixed**

Section 11 inflicts a penalty for violation of $100 to $1000, each day constituting a separate offense. Parties who have been discriminated against may recover one-half this fine, such suit to be brought in the name of and for the use of the party aggrieved.

Section 11a says the attorney general may bring suit for forfeiture of the charter of any corporation domiciled in Texas, and the court may permanently enjoin such company from doing business in Texas.

Section 11b provides that the same penalty as in Section 11a may apply to a foreign corporation, and its permit for doing business in Texas may be cancelled.

Section 11c says persons discriminated against may sue such common purchaser for damages.

Section 11d says the commission shall investigate and determine that there are sufficient connections in each field, and if there are not, they shall order such extensions and connections as are deemed necessary.

Section 11e declares that the commission may request the attorney general to bring mandatory injunction suits against common purchasers to compel reasonable extensions and to prevent discrimination.

Section 11f says that parties violating commission's orders already sustained by court judgments may be placed in receivership by the trial court, after the commission has so requested and has presented good and sufficient reasons for such request. The receiver shall make proper bond, then take charge of such properties. By showing that the party in receivership has not been a willful violator, such receivership may be dissolved. However, before dissolution of the receivership, the court may require bond to be filed to indemnify parties who might be damaged should the party in receivership continue to violate the rules. If bond is made by a surety company, it shall be a company authorized to do business in Texas. This bond may be sued on by parties who are injured by the acts of the violator in disobeying the said rule or order. Bond may be increased at the discretion of the court.

Section 11g says any common purchaser of oil or gas, in making purchases of royalty oil, shall comply with all the provisions of this act, and may not discriminate between royalty and land-owners in making purchases. Payments for oil purchased shall not be unreasonably delayed. Land-owners and royalty owners may sue for damages incurred through violation of this section.

Section 11h says all provision of the Title 102 of the Revised Civil Statutes as amended shall apply to the enforcement of this act.

Section 11 i declares that the commission is given $50,000 per year to enforce this act, from money raised from the tax in Article 6032 Revised Civil Statues of 1925, and if more is needed it shall be furnished from the general revenue fund.

Section 11j says the commission is specifically forbidden to limit, fix or adjust the amount of the production of crude petroleum or natural gas in Texas, for the purpose of balancing production with the current demand or market demand.

Section 12 permits aggrieved parties to appeal to the courts from the orders of the commission.

## Injunction Right For Those Damaged Also Provided in Bill

Austin, Texas.—A bill by Senator Woodul passed the senate Tuesday morning, August 11, giving the right of injunction and damage suits to parties who are damaged by drainage from leases which offset them. Another bill was also passed which aids in speeding up court procedure.

The free conference committee has made little progress so far. Charles West, representing the governor of Oklahoma, conferred with Governor Sterling this morning concerning the situation. He told Sterling that there was sufficient power under the constitution to permit the closing in of the oil wells of Texas under the common law. Governor Sterling admitted that he is undetermined as to his course of action if the senate and house cannot agree on a satisfactory conservation measure. He stated, however, that the call of another special session would be the last resort.

Many telegrams have been received commending the governor for his action of Monday in threatening martial law, and several guard units are ready to function on short notice. It has been pointed out that since the legislature will be held over after Wednesday on the Price impeachment trial, the governor may be able to have some action taken on conservation measures during that time. The constitutionality of any laws passed under those conditions has not been determined.

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Austin, Texas.—The graduated tax bill by West of Cameron passed the house Tuesday afternoon, August 11, by 67 to 57 and will go to the senate August 12. The tax calls for one cent tax per barrel on each well producing five barrels or less, and gradually increases until it taxes wells producing over 1000 barrels six cents.

## Test Near Tuxpan, Vera Cruz, Is Deepest Well Ever Drilled

Tuxpan, Vera Cruz.—Penn Mex Fuel Company's deep test on what is known as the southern extension of the "Golden Lane," near here, is now down to 10,040 feet using a 7⅝-inch bit. At this depth, this test is the deepest ever drilled in the world, being 10 feet deeper than Chanslor-Canfield Midway Oil Company's Hobson A2, which was bottomed at 10,030 feet, using a 4¾-inch bit.

A feature of this test concerns the solid limestone which was first encountered at 2267 feet, and which continued unbroken to 7960 feet, where the test was temporarily shut down pending the arrival of additional drill stem. No information has been obtainable as to the formations from 7960 feet to the present depth.

## Expect Wyoming Government To Require $1 Minimum Price

Cheyenne, Wyo.—It is believed entirely probable in Wyoming that a minimum price of not less than $1 per barrel will be required by the state government for all crude oil produced on its lands, and it is considered likely the federal government will do likewise on the lands it owns in the state which are oil-productive. Governor A. M. Clark of Wyoming has decided, after a consultation with heads of state departments, that henceforth no renewals will be given on state-owned leases without the stipulation being placed therein to the effect that a minimum price on the oil is to be $1. In the near future a number of important state leases will be up for renewal in the Big Muddy and Salt Creek field.

## Standard of California Pays Regular Dividend

San Francisco.—At a meeting of the board of directors of Standard Oil Company of California, held August 4, regular dividend Number 22, of 62½ cents a share, was declared, payable on September 15, 1931, to all stockholders of record as shown by transfer books of the corporation in San Francisco and New York at the close of business on August 15, 1931.

Operating income of the company for the second quarter totaled $5,103,307.10 as compared with $15,103,672.38 for the second quarter of 1930. Operating income for the first six months of 1931 totaled $13,693,423.25 as compared with $29,244,214.43 for the same period in 1930.

Net profit for the second quarter was $1,275,358.27, and for the half year, $10,288,300.11 as compared with $5,643,-967.77 and $19,718,534.56 respectively in 1930.

## Additional Gathering Lines Planned for Texas Panhandle

Amarillo, Texas.—Continental Construction Company will start work shortly on the installation of about 90 miles of field gathering lines, consisting of welded pipe ranging from four to 12-inch, in the Texas Panhandle. This gathering system will connect with the company's 24-inch natural gas line that is scheduled to begin delivering Panhandle gas to Chicago and intermediate points within a few months.

## Texas-Empire Line Provides Additional East Texas Outlet

Houston, Texas.—Purchase of right-of-way for a trunk line outlet from the East Texas field to Port Arthur refinery and terminals of The Texas Company was started early this week by The Texas-Empire Pipe Line Company to provide facilities for handling about 75,000 barrels of crude daily. The company is owned jointly by The Texas Corporation and Empire Gas & Fuel Company (Henry L. Doherty interests), and is the second major pipe line project to be undertaken by the latter two concerns on a 50-50 basis, as a 680-mile 12-inch carrier is being operated from Cushing, Oklahoma, to East Chicago, Indiana, and intermediate points. In addition to taking care of controlled oil in East Texas of The Texas Company and Empire interests, the line will allot space to a group of other companies on a common carrier basis. Bert E. Hull, Houston, is president of The Texas-Empire Pipe Line Company and The Texas Pipe Line Company.

Twelve-inch welded pipe will be used in the main line of The Texas-Empire Pipe Line Company's system, which will originate about four miles northwest of Kilgore, Gregg County, and extend almost due south in reaching Port Arthur, a distance of about 208 miles. Construction of this carrier is expected to establish a record on elapsed time for a line of its size, as contractors are to use eight construction crews, and complete the line within 30 days from the date of arrival of first pipe. The pipe is now en route by rail the entire distance, and will arrive at rate of 10 miles daily.

N. A. Saigh Company, San Antonio, and Apex Construction Company, Tulsa, were awarded contracts to construct equal portions of this trunk line. Both contractors are moving in equipment to operate four crews each, thus giving each crew an average of about 20 miles of line to complete within the specified period. It is reported that a bonus of $1000 per day is to be paid contractors if the line is completed ahead of schedule, but if delay takes place a penalty for a like amount will be exacted.

The Texas Pipe Line Company is operating a 10-inch carrier, extending from the Kilgore area via the Joiner field to Douglas station, Nacogdoches County, where connection is made with an eight-inch line that pumps East Texas crude from the latter point via San Augustine to Port Arthur, and also to the northwest from Douglas to Corsicana, thence south to Houston and Port Arthur. This East Texas outlet was handling about 55,000 barrels daily prior to the burning of the San Augustine station, and will shortly have a capacity of above 60,000 barrels daily through the addition of three new stations between the latter station and Port Arthur. Because space in this line was contracted by other East Texas companies, The Texas Company is shipping large quantities of its own production and purchased oil from East Texas by tank cars to Port Arthur, Galena and Dallas.

Five mainline stations to be installed on the 12-inch carrier will be equipped with Diesel oil engines connected through speed-increasing herringbone gears to centrifugal pumps. The main field station will be located adjacent to The Texas Pipe Line Company's Munro station, R. B. Wall tract, M. Tenison Survey, Gregg County, and about 1½ miles south of the Sabine River. The remaining stations will be located near New Salem, Lufkin, Kiam and Sour Lake. Three or four field receiving stations will be constructed at scattered points in the East Texas field in connection with the extensive gathering system that has been authorized for all sections of the field.

(*Continued on page* 56)

# Personal Mention—Men You Know

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CHARLES ROBERT EASTERLY, 51, division superintendent of production for Mid-Kansas Oil & Gas Company in the Yates field, with headquarters at Rankin, Texas, died suddenly August 1 at his home as result of a heart attack. The body was forwarded to Bryan, Ohio, for burial.

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O. E. MITCHELL, vice-president and comptroller for Texas Pacific Coal & Oil Company, has transferred his headquarters from Thurber, Texas, to the general offices maintained by the company at Fort Worth, Texas.

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B. P. CRITTENDEN, vice-president of Louisiana Oil Refining Corporation, resigned during the past week. No announcement of Mr. Crittenden's future plans was made except that he was leaving immediately for New York City to join his family and with them would return to Shreveport about September 1. No successor to Mr. Crittenden has been chosen.

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EDWARD T. MOORE, president, Simms Oil Company, Dallas, departed last week, accompanied by his wife, on a vacation trip to Los Angeles, and will remain on the West Coast during the balance of August.

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C. E. POLLARD, 52, pioneer operator in the Texas Panhandle with headquarters at Pampa, Texas, was fatally injured in an auto smashup on August 6, near Grant City, Missouri, while en route to Marion, Iowa, to visit his parents.

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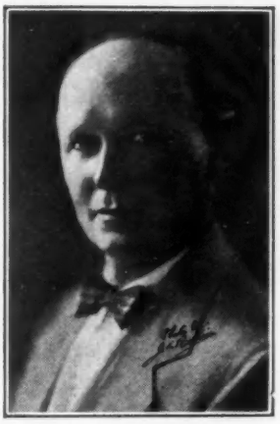
RUSH M. BLODGET has been elected general manager of the Oil Producers' Agency, and R. A. Broomfield was elected vice-president, to succeed Neal H. Anderson, who resigned to become umpire for California. Blodget is vice-president and general counsel for George F. Getty, Inc., while Broomfield is president of Barnsdall Oil Company of California. In commenting on conditions, Blodget said:

RUSH M. BLODGET

"Conditions in the oil industry are slowly but surely improving. As the public comes daily to a clearer understanding of our problems, we feel surer of our steps at stabilization. The various groups which have given helpful publicity and assistance have cleared away many of our difficulties.

"The agency, whether representing a part or all of production of the state, must act in all respects as a servant of the industry as a whole and as a wheel in the entire economic structure."



RAY M. COLLINS

RAY M. COLLINS completed, on August 7, his fourth year as proration umpire for Oklahoma. For more than 27 years an Oklahoma operator and the last four in the role of an independent producer and proration umpire, no one is more qualified to speak authoritatively on the conditions which led to enactment of the Conservation Act of 1915 and subsequent events which have made its enforcement essential to the oil industry.

During the latter part of 1926, conditions in the Seminole district were such that operators realized something must be done to avert a flood of oil which was more than likely to break the market. It seemed essential that drilling be curtailed and production prorated in such a manner as to insure an orderly development of the known structures and avoid repetition of conditions that had existed in Healdton and Cushing pools several years prior. In order to achieve such an undertaking operators were in need of the services of a man who understood the oil business in all departments and whose interests were unbiased. Coming from a line of oil operators who had pioneered McKean County, Pennsylvania, and having seen the results of over-production and inequitable taking as an independent operator in the Cushing pool, Mr. Collins was outstanding among the men who were considered for the position. In October, 1926, he was appointed umpire for the Seminole district and shortly thereafter commenced a detailed survey of the various pools and the possibilities of production from outlying areas. The report was completed in February, 1927, and proration put into effect for about 30 days. From that time until he was appointed state umpire, no further restrictions were applied.

Seminole reached its peak during the week ending July 30, 1927, when 666 wells averaged 529,596 barrels daily. Seven days later Ray Collins was appointed state umpire and proration again went into effect in the Seminole district. A restricting order was placed on shooting wells in the pools and drilling was curtailed in a number of outlying areas. With exception of the period May to September, 1929, production has been continuously prorated in Seminole. East Earlsboro and Oklahoma City were added on September 29, 1929, and on January 1, 1931, the order was made state-wide when all settled pools were placed on a marginal basis.

In commenting on the activity of several oil companies and individuals Mr. Collins said:

"The charge that proration is price-fixing is without basis. Purchasers of crude oil have been willing to take only certain amounts in various state pools. It has been our job to see that these demands were equitably apportioned between pools and between all operators, both large and small.

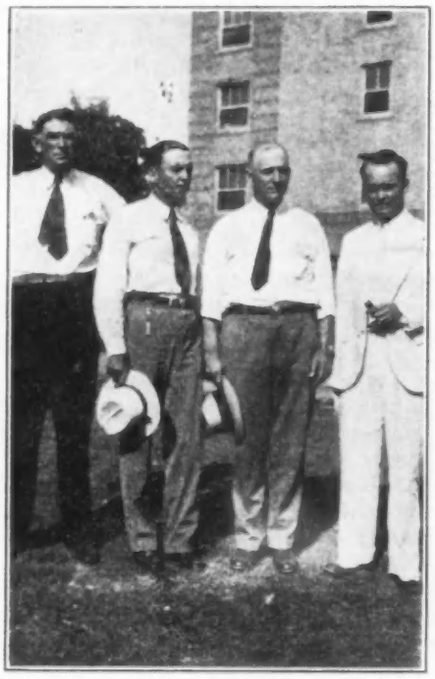
"We, as administrators of the proration regulations, have not been concerned with the price of crude oil except as it has affected the industry as a whole, and this concern has in no way guided our methods of applying the rules set by the corporation commission."

# "SHOTS FROM THE HOT SPOT"

*F. M. Loop, general superintendent over properties in Texas and New Mexico for "Trapshooter" Reilly Oil & Royalties Company (left) and Arthur J. Penick, president, Oil Center Tool Company, snapped at Kilgore.*

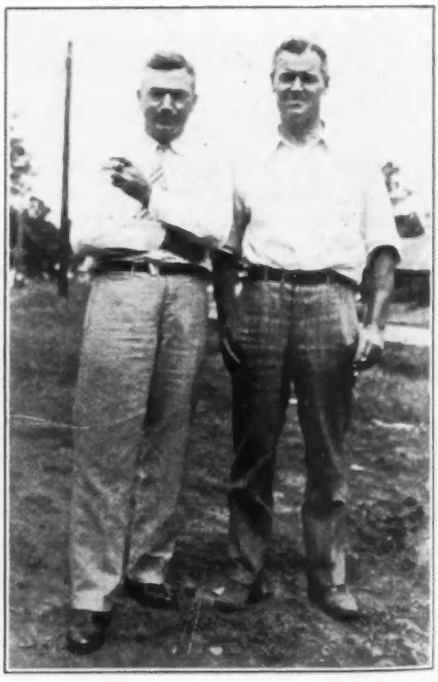
*Clem H. Roberts, vice-president and general manager, Walter Connally & Company, Tyler; and his negro helper, George Mitchell, who has served him 22 of his 29 years with this distributing company.*

*W. A. "Red" Davis, division representative for Baker Oil Tools, Inc., covering the Texas, Louisiana, and Arkansas territory, left; and T. Sutter, sales manager for the company, visiting in East Texas out of California; snapped at Longview.*



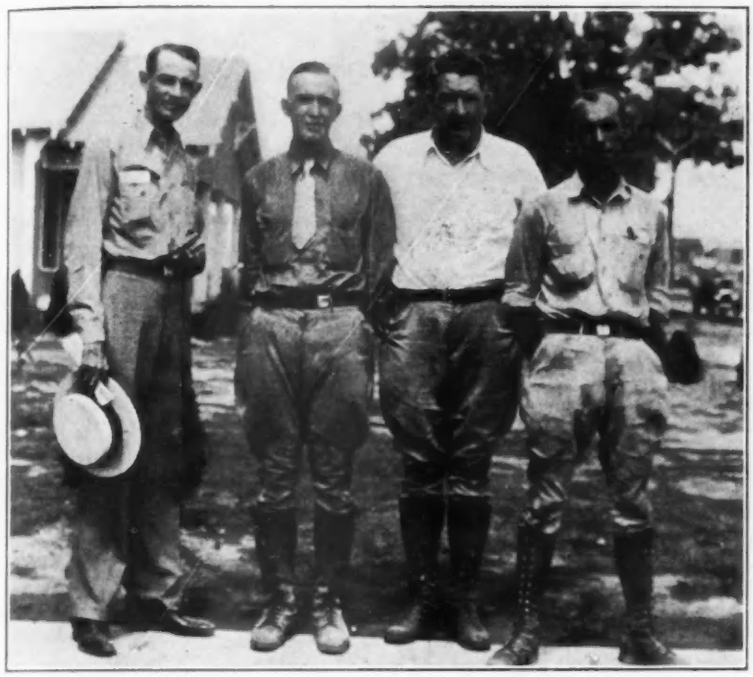
*Left to right: Blaine Johnston, vice-chairman of A.P.I. East Texas chapter; L. C. Peters, vice-chairman, Kilgore division; R. W. Taylor, chairman; and E. L. Davenport, secretary-treasurer. These men took leading parts in the recent organization of the new chapter.*

*Frank LeBus, manager, LeBus Rotary Tool Company, (left) now in charge of the company's Willow Springs shop in East Texas; and C. H. Bailey, who recently joined LeBus in East Texas, coming form Oklahoma City.*

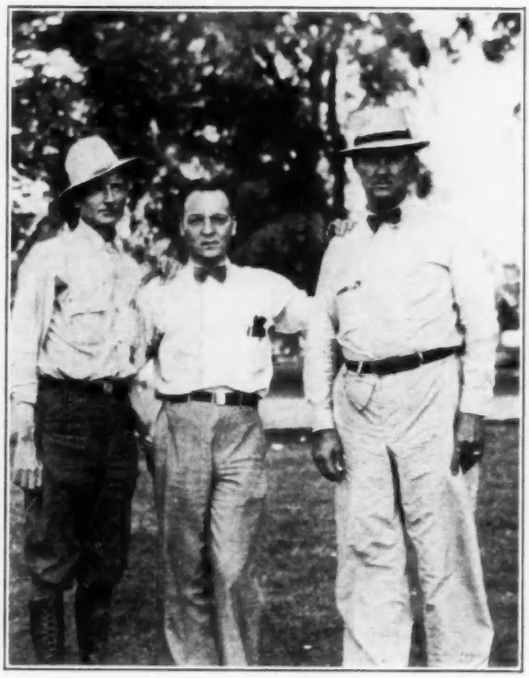


*William H. Elliott of Maloney Tank Sales Company, left; and Carl Ahrens, sales manager for Southern Mill & Manufacturing Company, in charge of the recently established Longview plant.*

# A Photographic Record of Who's Where in East Texas

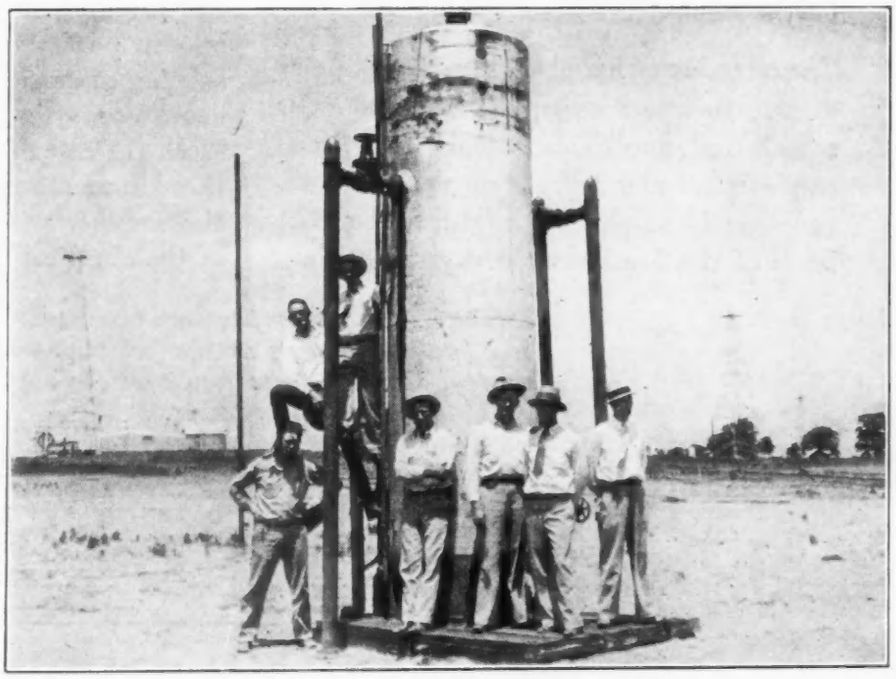


*Left to right: Wayne Lanier, chief warehouseman in East Texas; W. W. Hammond, geologist; E. N. Wilson, East Texas district superintendent; and Ray Kilchenstein, production foreman in the Lathrop district, for Magnolia Petroleum Company.*



*Hill Adams who has been with Republic Production Company ten years as scout and land man; Noble Ginther, six years a scout with Houston Oil Company, and Joe Simmons, drilling contractor, formerly scout for Shell Petroleum Corporation. These three are among the best known scouts in Texas.*

*H. U. Garrett, East Texas factory representative for Gearench Manufacturing Company of Houston.*



*Left to right: Jim Ward, National Tank Company; W. H. Crutchfield, J. B. Haden, J. P. Williamson, L. H. Sloan, W. P. McLaughlin and C. D. Dotson, Houston Oil Company of Texas.*

# A TOAST *to the* SWITCH *and the* VALVE

WHEN all the statisticians meet in convention assembled and total up the last indice of Southwestern progress, the chances are that the resolution committee will have a good word to say for the part that oil and electricity have played in amassing the astounding totals.

The oil industry has given impetus to some of our foremost cities, has enriched our schools and public institutions, has given employment to hundreds of thousands of people and brought new wealth to the vast lands of the Southwest. The electrical industry has brought power to thousands of new industries, provided dependable transportation in our cities and eased the burdens of men, women and children in every county throughout the whole Southwest.

In the Gulf Coast country we find electricity working in the oil fields to provide instant power for the drilling of wells, lighting of derricks, pipe lines and assisting in many ways to increase production and lessen the cost of producing oil. The hand that knows the feel of a throbbing valve is also familiar with the power that is back of the electrical switch.

*Engineers of this company are familiar with the power problems of the petroleum industry. Consult them freely on the use of electric Power.*

GULF STATES
UTILITIES COMPANY

*General Offices*

BEAUMONT, TEXAS LAKE CHARLES, LA.

# News From California Fields

**BRAD MILLS,** ***Staff Representative, Los Angeles, California***

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## California's New Well Total of 252 Is Half of Past Year's

Los Angeles.—The total number of new wells started in California during 1931 stands at 252, as compared with 501 at the same time last year, for the 1930 period. This is almost exactly one-half the number for last year and represents a greater drop than expected.

The decline in activity has not been confined to any field or group of fields, while wildcatting has suffered the same sharp drop. The 1931 total is the smallest recorded in many years and there is every indication that the period will set a low mark for the present cycle of field development.

Such fields as Long Beach and Santa Fe Springs have not boosted the number of permits, and Playa del Rey and Kettleman Hills have also made a poor showing. In the absence of a boom field, the number of permits issued by the state has reflected the efforts toward curtailment.

Active drilling wells total about 175, but completions are holding up better than other branches of field work.

Wildcatting has been largely killed off by low crude prices and overproduction in the flush fields. This phase of drilling was slow to reflect unfavorable conditions, but the drop was sharp when it struck.

## North Dome Well Through Temblor Eagerly Awaited

Coalinga, Calif.—Completion of Associated Oil Company's Whepley 2, the first North Dome test at Kettleman Hills to drill through the Temblor formation, is being awaited with interest, since this well should make one of the best producers in this part of the field. The first definite Kreyenhagen fossils were found at 8773 feet, but a brown shale body was tapped at 8753 feet. Allowing for the dip of the structure, the Temblor zone will apparently average 1600 feet in thickness. Total penetration in Whepley 2 was nearly 1650 feet, but this well is located on the northeast plunge. Drilling was stopped at 8789 feet, and just short of a potential record producing depth. The upper gas will be shut off to obtain a low gas-oil ratio.

North American Consolidated Oil Company is reaming to cement a string of nine-inch casing in Blauvelt 1, a North Dome test which is finding the Temblor zone deeper than any previous well. This remarkable well already holds the record for a 13⅜-inch string, this size casing having been landed at 6763 feet. Every precaution is being taken to make the landing of the nine-inch successful. Likelihood of freezing and other complications are being avoided by a careful reaming of the hole.

Superior Oil Company is rigging up at Bolsa Chica Oil Corporation's Ferguson 1, which was shut down more than a year ago at 7690 feet, and will deepen and test this North Dome edge well. There was some question concerning the formation before the well was shut down, but the government allowed a discovery on showings below the nine-inch shut-off at 7275 feet. Absence of the brown shale was puzzling, and it may be necessary to drill considerably deeper to find the Temblor zone. A good gas pressure was developed in the well before it was shut down, but the location is so near the maximum producing line that only the drill will disclose the possibilities of the immediate district.

Petroleum Securities Company is drilling in brown shale at 7365 feet in Burbank 1, a Middle Dome test, and should reach the Temblor formation with a few feet. A successful water shutoff was obtained with the 8⅝-inch casing at 7326 feet. This is now the most important test in the field, since upon its outcome depends the amount of drilling to be done on the Middle Dome. A good well here would result in extensive drilling operations and development of a much larger production.

Agreements to hold production on the North Dome to 60,000 barrels have affected field operations, and few new locations are expected. Only a few wells are required to raise the potential sharply, and for this reason there is little cause for drilling and completing wells, only to have them beaned back, or entirely shut in.

## Los Cerritos Well Arouses Interest in New Formation

Long Beach, Calif.—Completion of a 2000-barrel producer in the Los Cerritos extension during the week by Richlin Oil Company gave the Long Beach field the first excitement it has had for months, and paved the way for considerable field work in this sector. Completed at 7953 feet, the well opened an entirely new producing level at Los Cerritos. The oil was clean and 31 gravity. This well was originally completed at 7688 feet and what was formerly the deepest producing zone in the extension. The action of the well indicates that a sand better than the ordinary run at Los Cerritos has been found.

This district has been notorious for flashy performances, and it is doubtful whether the majority of producers have proved profitable. As a result of Richlin Oil Company's completion, nearly a dozen wells will be deepened immediately to the deeper producing zone. Many producers around 7600 feet can be deepened with a minimum effort.

Since each succeeding deeper zone has proved better in spots than the shallower sands, there will be little hesitancy on the part of producers who are not getting much oil at present completion levels.

## California Laws Affecting Oil, Held Up By Opponents

Los Angeles.—Two laws recently passed by the state legislature have been held up by referendums which have been obtained by opponents of the two measures. One law would allow the director of finances power to grant drilling on state tideland permits. The other, the Sharkey bill, was a measure to enforce conservation through curtailment. Enough signatures have been obtained to force action by Governor Rolph. If no special election is called, the laws may go by default. The Sharkey bill has been opposed by many small operators, who claim that it will permit the larger companies to control production.

## Operations Are Resumed on Huntington Beach Deep Test

Huntington Beach, Calif.—Resumption of operations by Superior Oil Company in Fee 1, the original deep test in the Huntington Beach field, has added interest to deep development in this district and indicates that the company is anxious to complete a producer in an entirely new zone. Fee 1 has been shut down since February and was drilled to 7491 feet. An oil string was landed on bottom but no test was made. A heavy gas pressure was developed below 7000 feet, but the company was reluctant to release any information during actual drilling operations. A quantity of weight material and gas traps has been placed on the ground.

Superior Oil Company's Gillette 7-1 has passed a depth of 8000 feet and will be tested in the zone which barely failed to produce in W. E. McCaslin's Transport 1. This well has also developed a good gas pressure and the cuts show a lighter oil than that produced in the shallower sands.

W. E. McCaslin is circulating at 8365 feet in Transport 1, following an unsuccessful production test. Mud in the bottom of the hole may have caused trouble, but a sinker bar was run to bottom with ease. This well is not in good mechanical condition, and might make a small producer under more favorable conditions.

## North Belridge Test Is Abandoned at 5671 Feet

Bakersfield, Calif.—Standard Oil Company of California is abandoning McPhail 2, a North Belridge test, at 5671 feet. The Temblor formation was found, but it proved to be wet. The producing formation in this field dips sharply and is very narrow. Company's McPhail 1, which was drilled to 5428 feet and shut down several months ago may also be abandoned.

Continental Oil Company's Result 2 is producing somewhat steadier than at first and will make a fairly good flowing well. Production is running at the rate of 1000 barrels of 40 gravity oil, and the cut has been reduced to three per cent. This well was drilled to 5475 feet and is flowing through one small bean.

## Brea-Olinda Oil Company To Take Over Olinda Holdings

Los Angeles.—Brea-Olinda Oil Company has been organized to take over the holdings of Olinda Oil Company in the Olinda district. Union Oil Company at one time held a lease on the 3000-acre tract, but recently quitclaimed it.

Three deep wells were drilled by the relinquishing company without results. Only a small part of the tract is productive. Twelve wells have been completed on the lease, but of this number, only five are producing. Other wells will be cleaned out and placed on production.

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Santa Barbara, Calif.—Ohio Oil Company has spudded Oakley 1, Section 16-4-28, a wildcat test near Goleta, and is drilling rapidly ahead at 500 feet in surface sand and shale. This well is located in the flats a short distance from the ocean and is the first test drilled in the immediate sector. General Petroleum Corporation has drilled three wells on the More ranch, a short distance to the west, but there is no direct connection between the two areas. This is the first new wildcat test started in Santa Barbara County in some time. The Elwood field lies roughly in line with the Goleta structure.

# ▼ NEW MEXICO - ROCKY MOUNTAIN AREA ▼

## Report Slow Progress On Test in Boxelder Basin

Douglas, Wyo.—Otto Olston and Benzol Corporation, Chicago, reported slow progress in clay formation for the first 110 feet in the wildcat well being drilled on Boxelder Basin structure, on the Careyhurst ranch, belonging to United States Senator Robert D. Carey. The well is the first of a program of four to be drilled on the structure. The second test, for which location is spotted, will be a deep test to the Tensleep and Madison.

## Midway Dome Test Cleaned of Bridge Without Trouble

Casper, Wyo.—Midwest Refining Company is experiencing no little difficulty in cleaning out the bridge half-way up the hole in the test well on Midway dome, 12 miles north of Casper. Last week it had been impossible to establish water circulation below 4000 feet. The well is bottomed in the Muddy sand at 5908 feet in the Muddy sand where bailing started. Pressure threw tools up into the hole along with much shale which, with wadded wire, effected a good bridge. The tools have been recovered.

## Wildcat Test Near Cheyenne, Wyoming, Finally Abandoned

Cheyenne, Wyo.—Having struck artesian water at 639 feet, Prairie Oil & Gas Company has abandoned its wildcat well on the Borie ranch, southwest of Cheyenne. Well has been taken over by Warren Livestock Company and is to be used for irrigation purposes and for a supply for stock. When the drilling was stopped, hole was bottomed in the Foxhills formation, which the company had been led to believe would not have been encountered at the location inasmuch as it had been thought the well started below that formation. The conclusion was that the objective horizon could not be reached within less than about 15,000 feet, considerably deeper than the company had anticipated going.

## Greasewood Test is Most Interesting in Colorado

Denver, Colo.—Reiter-Foster Oil Corporation's test on the Greasewood dome structure, in Weld County, Colorado, is the most interesting operation in the state at present. It was last reported drilling below 6500 feet. Reiter-Foster Oil Corporation, Continental Oil Company, and several others, are starting wells in the Weld and Morgan County territory which has attracted so much attention this season.

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Baggs, Wyo.—Drilling operations are resumed on the Baggs gas structure by the Bivens interests, it is reported this week. The Bivens people have two gas producers on the structure; one bottomed at 900 feet is good for 5,000,000 and another which has for its objective still deeper horizons, is good for 25,000,000 feet at 2600 feet depth. The company has a certificate to lay gas line from the structure to Laramie on condition that within one year's time sufficient gas has been developed to supply the city with its fuel requirements of 50,000,000 feet or more.

# Oklahoma--Kansas Field Notes

**FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma***

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## Oklahoma City Production Shows Effect of Shut-Down

Oklahoma City.—Governor William H. Murray's shut-down order, which first went into effect in the Oklahoma City pool on Tuesday afternoon, August 4, did not reveal its force until August 7 when 14 wells produced only 1624 barrels during the 24-hour period ending at 7 a. m. on that day. Anticipating the order operators had run considerably more oil than had been produced during the last few days of the preceeding week when the voluntary shut-down was in operation. It was evident after the governor's press conference of Saturday, August 1, that the order would be forthcoming within a few days and producers took advantage of the new period of allowable beginning on that day and filled as much storage as could be handled in an orderly manner. Daily production was as follows:

| | | |
|---|---|---|
| August 1—39 wells produced | 82,255 | barrels |
| August 2—79 wells produced | 183,778 | barrels |
| August 3—36 wells produced | 40,651 | barrels |
| August 4—69 wells produced | 164,539 | barrels |
| August 5—71 wells produced | 137,173 | barrels |
| August 6—31 wells produced | 38,794 | barrels |
| August 7—14 wells produced | 1,624 | barrels |
| August 8—17 wells produced | 4,052 | barrels |
| August 9—13 wells produced | 4,022 | barrels |
| August 10—13 wells produced | 1,492 | barrels |

In addition to this, new wells completed during the week produced a total of about 15,000 barrels and five wells made up 14,041 barrels not listed above.

In applying the order Lieutenant Colonel Cicero I. Murray in conjunction with Otto Bradford, field umpire, exempted gas wells and wells making water. Among the wells thus exempted were Sinclair Oil & Gas Company's Kinter 1 and Stamper 1; Wirt Franklin's Theimer 3 and 5, and Coker 1; Champlin Refining Company's Seal 2; Cromwell and Franklin's Trosper Park 7; Mid-Kansas Oil & Gas Company's Fortson 5; Anderson-Prichard's Gibbons 2; Indian Territory Illuminating Oil Company's Alice Bodine 1; and Shell Petroleum Corporation's Petty 5. Eight are lower Simpson producers and three are Arbuckle lime wells. No definite announcement has been made as to the manner of exempting wells making water. Practically all wells producing from the latter formation are making water and some in considerable quantities. Exemption of all wells in this zone would add more than 100 producers to the list but the production of this group would not have a material effect on the pool as a whole since oil production has been largely exhausted and it is doubtful that present facilities could take care of the water that would be produced should operators decide to open the Arbuckle zone wide.

Eight wells completed during the week added a total of approximately 188,000 barrels to the potential which now stands close to 8,500,000 barrels, according to calculations by the field umpire. Slick estate had the largest completion of the week when its Whitfield 2, NW SW SE SE Section 34-12n-3w, in the northern portion of the pool, came in for a flow of 2478 barrels in one hour and 17 minutes. This gave it a potential of 46,080 barrels calculated on a 24-hour basis. Production is coming from Wilcox sand topped at 6230 feet and drilled to 6433 feet. Gas was gauged at 37,500,000 cubic feet. Runner up and not far behind the biggest was Phillips Petroleum Company's Reserve 1, NW NW NW NE Section 3-11n-3w, which did 7181 barrels the first four hours flowing through a four-inch choke under 225 pounds back pressure.

Other completions were as follows: Slick estate's Boroughs 2, NE NE NW Section 10-11n-3w, 2347 barrels and 35,500,000 gas from Wilcox at 6355 to 6528 feet; Indian Territory Illuminating Oil Company's Ivanhoe 3, NW SE NE Section 15-11n-3w, 2467 barrels in five hours with 750,000 gas at total depth of 6395 feet in Wilcox sand; Shell Petroleum Corporation et al's Detterding 1, NWC NE NW SW Section 10-11n-3w, 1931 barrels in three hours with 15,000,000 gas at total depth of 6538 feet in Wilcox sand; Slick estate's Central 3, NW SE SE SE Section 3-11n-3w, 11 barrels of oil in three hours with 12,000,000 gas at 6248 to 6335 feet in Wilcox sand; Slick estate's Central 4, SW NE SE SE Section 3-11n-3w, Wilcox sand 6245 to 6298 feet, bailed down and shut in with 9,500,000 gas and no oil showing; Wilcox Oil & Gas Company and Anderson-Kerr's Danforth 1, NE SE NE SW Section 15-11n-3w, 2140 barrels in 1½ hours with 27,000,000 gas from Wilcox sand at 6440 to 6540 feet.

On August 1, 35 wells were flowing natural, one was on gas lift, two were swabbing and one well was pumping on the beam. Since the engineer's report presented to operators earlier in the year, considerable repair work has been done on wells that are making water and those whose oil-gas ratios were considered too high.

Wells in the Arbuckle lime zone whose production has gone below the point of economy are plugged back either to the Pure sand which lies near the base of the Pennsylvanian or to the Layton series about 4800 feet. One remarkable feature of Arbuckle lime wells that have declined to a low point, is the ability to build up high rock pressures. During one of the 30-day shut-down periods in 1929, this zone showed a continuous change of rock pressure and fluid levels indicating a readjustment of pressures thrown out of equilibruim by the method of production then in use. Eventually all wells in this part of the pool will be plugged back to upper horizons but this program will not be put into effect except as additional gas is needed for gas lift in other parts of the pool and to supply increasing demands for commercial uses.

## Shut-Down of Seminole Area Accomplished Without Trouble

Seminole, Oklahoma.—Shut-down of the Seminole district by executive order followed that of Oklahoma City when Cicero I. Murray, cousin and oil advisor of the governor, went into the pools during the latter part of the week and closed all wells not making water or falling within the 25-barrel margin allowed under former proration regulations. Operators submitted lists showing status of wells and made exemption requests. The com-

plete list of exempted wells has not been released but it is understood that Murray tentatively accepted the opinion of all operators and will later confer with Ray Collins, state proration umpire, before issuing the permanent list. No opposition was met in carrying out the edict and presence of national guardsmen was merely a matter of form.

J. Edward Jones and Burgher Oil and Gas Company are shut down at their Charlie 1, SW NW SE, Section 18-8n-6e, in the south Mission pool. Wilcox sand topped at 4296 feet is reported to have shown a well saturated core but the sand at 4300 feet indicated water and drilling was discontinued. A string of six-inch casing will be run and the sand tested with cable tools. Boettcher Oil and Gas Company's Schramm 1, CSE NW Section 11-7n-8e, topped the sand at 2956 feet and is reported making an estimated 40,000,000 feet of gas at 2973 feet. It is located slightly over a mile northeast of Holdenville in Hughes County.

## East Extension of Tatums Pool Has Small Completion

Ardmore, Oklahoma.—The east extension to the Tatums pool, being the only flush area in southern Oklahoma, is the only pool unaffected by Governor William H. Murray's shut-down order put into effect during the latter part of last week. One small well was completed during the week, two were waiting on cement to set, and one was building derrick and moving in tools. With completion of two wells during the coming week, the pool likely will have only one active operation.

Carter Oil Company, E. B. Cox and Jake L. Hamon completed their J. B. Spraggins 1, NW NW SW Section 19-1s-2w, swabbing 217½ barrels the first 24 hours. Production is coming from a series of sands logged between 1780 and 1965 feet. It is a south offset to Carter Oil Company's Paul Robb 2, which made 1210 barrels during its first 24 hours and a west offset to Trevelyn Oil Company's dry hole. Magnolia Petroleum Company has drilled plug in its Mose Dickerson 5, NE NE SE Section 24-1s-3w, and was drilling in sand at 1985 feet. The well made several small flows Friday night, August 7, while being bailed. K. D. Oil Company and Frank Gouin set casing at 2216 feet on top of sand series in their M. E. Burton 1, CS½ SW Section 30-1s-2w, three-eighths of a mile south of production; total depth is 2400 feet. Carter Oil Company moved tools from the J. B. Spraggins 1 and is rigging up at Franklin 4, NE NE NE Section 24-1s-3w, on the northeast edge of the extension. Two locations are being carried but it is doubtful that either will be started until the present situation has been cleared.

Batson, Starritt and Autry are shut down for repairs at their Dr. Autry 2, SE SE Section 27-6s-2e, about seven miles northeast of Marietta. Total depth is 1335 feet in sand showing oil topped at 1324 feet.

## Complete Second Largest Gasser in Cut Bank Field

Cut Bank, Mont.—The second largest gasser was completed in the Cut Bank field, north of this town recently by the O'Neil interests. The well is good for 27,000,000 feet and proves a material south extension to the field. The O'Neil interests are developing a supply of natural gas which is to be used for Montana Power Company's pipe line to Southwestern Montana cities and towns. The O'Neils have now developed about 90,000,000 cubic feet for the line, not quite half of what will be required.

## Kansas Commission Demands 60-Cent Oil or Shut-down

Topeka, Kansas. — Through its public service commission Kansas has set out to get 60 cents a barrel for crude oil produced in that state. Thurman Hill, member of the commission, Monday, August 10, sent letters to crude oil buyers in Kansas to the effect that failure to pay as much as 60 cents a barrel would mean a public hearing to consider a shut-down of some nature for oil fields.

The letter sent buyers was as follows:

"The commission has been reliably informed that Kansas refineries are now buying crude oil from Texas at an average cost of 70 cents per barrel. Strange as it may seem these purchases are being made because of a shortage in available Kansas crude. The commission, since the enactment of the proration law, has refused to consider a complete or partial shut-down believing it was better for the interests of the state at large for the producers to suffer financial loss than laborers employed in oil field work, refineries depending upon crude oil from Kansas for its supply, and farmers, who needed gasoline during harvest time.

"We knew the producers at 42 cents a barrel were receiving less than it cost to produce the oil but we had no power to fix prices, nor did we desire to do so—but we believed as long as no competing oil from Oklahoma or Texas came into Kansas that we should not interfere.

"Now it appears that Texas, apparently willing to give away its natural resources, is dumping oil into Kansas costing an average of 70 cents a barrel laid down at refining points in this state while the same refineries are paying 42 cents average for oil of same gravity to Kansas producers. Assuming but not admitting that gathering cost of Kansas oil exceeds Texas oil by 10 cents, it is clear that Kansas oil should be worth at least 60 cents per barrel. As a matter of fact based on Bureau of Mines statistics, oil in Kansas today should bring $1.80 per barrel assuming supply and demand fix the price.

"With these facts confronting the oil division of the commission we no longer feel it our duty to withhold partial or complete shut-down orders. Unless the purchases of crude oil in Kansas this week extend to producers of Kansas the same consideration they are granting to the producers of Texas crude, a hearing will be ordered to determine the nature and extent of a shut-down order in this state."

**Executive Order Oklahoma's Order of the Day**

(*Continued from page* 16)

"When I went to school a few months at 20 to 25, I grew so all-important to myself that I doubted the sanity of old fogies.

"From 30 to 35 I came to the conclusion my father was the same man he always was. From 40 to 45 I sought his advice.

"At the age of 60, would to God I had his wisdom."

William H. Murray has been laborer, farmer, editor, lawyer, colonizer, congressman and governor. Telegrams pour into his office at Oklahoma City urging him to become a candidate for president. Thousands feel that the nation needs more men of the stamp and mold of the Sage of Tishomingo. Others think one is more than is needed.

There is only one William H. Murray and there can be no other. His like appears just now and then. In times of stress such men come to the front for those who having felt the hand of depression turn to men of the rough-hewn and home-spun mold.

# East Central Texas Field Notes

**H. H. KING,** ***Staff Representative, Fort Worth, Texas***

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## East Texas Tank Shipments Are Nearing Maximum Level

Longview, Texas.—Tank car shipments of East Texas crude to coastal points and interior refining centers are nearing the maximum level because of inability of shippers to obtain additional cars, but continued expansion of production in the field is possible through running of oil to large field storage tanks; completion of new refineries; enlargement of pumping capacity of operating trunk lines; and approaching completion of new carriers. Trunk lines completed, building and authorized will afford an aggregate capacity of 745,000 barrels daily, and will be in full service before close of September if the oil is available. Tank car shipments apparently will be limited to approximately 200,000 to 250,000 barrels daily because of scarcity of cars, while local refineries will soon be processing 75,000 barrels of crude daily. Available field storage can absorb a large volume daily. These figures reveal that a 1,000,000-barrel daily yield by the East Texas district will not be difficult to accommodate.

Long-distance shipping of East Texas crude lately has materially reduced the supply of tank cars, owing to the delay in completing round trips. Tank car concerns have placed every available car in service, and late last week standing orders had been placed by major companies and independents for a total of about 2000 cars. Many car owners have converted clean gasoline cars into this crude service in order to supply regular customers. East Texas shippers have been able to obtain cars until recently on a mileage basis, but the increased demand has resulted in car rental concerns demanding 30 and 60-day leases. The uncertainty of the heavy crude movement over a long period has prevented car owners in California and other distant states from releasing the cars for East Texas service.

Shipments of East Texas crude to refineries in Canada, Illinois, Nebraska and just recently to points in Kansas and Oklahoma do not permit many round trips per month for a car. It is these long hauls that has brought on the car shortage, as some few months ago 200,000 barrels of crude was moving out of East Texas daily with cars to spare, but most shipments were consigned to Texas, Louisiana and Arkansas points, with round trips being made in three to five days.

Crude loadings are being made from about 40 tank car racks scattered among four railroads that cross or are adjacent to the East Texas field. These railroads are equipped to handle any volume of oil that tank cars can be provided for, and for the time being at least the field is capable of producing on the same basis, as well as taking care of trunk lines, refineries and field storage.

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Tyler, Texas.—Credited with a daily average crude yield of 660,960 barrels from 1477 wells during the week ending August 5, the East Texas field eclipsed its record output of the previous week by 61,450 barrels. The Joiner area failed to record any appreciable gain but the Kilgore section climbed to a new peak of 284,980 barrels from 606 wells. The Longview area averaged ,10,200 barrels more than its peak on the week previous.

## Test on Northeast Edge of Longview Area Fails to Flow

Longview, Texas.—Testing of C. M. Becker et al's J. C. Barrett 1, located on the extreme northeast end of the Longview section of the East Texas field, during the past week failed to yield a flowing producer. This outpost well is located about one-half mile northeast of the nearest production and in the southwest corner of 100-acre lease, B. W. Witche Survey, Gregg County. It was credited with having 1000 feet oil in hole, with a closed casing pressure of 145 pounds, and is producing from broken sand and gravel formation at 3607-47 feet, or a sub-sea depth of 3311 feet.

McMahon-McCullough et al's E. H. Hamilton 1, located in the southeast corner of 80-acre lease, M. Chandler Survey, afforded a north extension to the productive limits of Upshur County with a small well, but is believed to be too low structurally to produce without making water. This edge well logged broken sand at 3756-62 feet, and was shut in after making a few flows of oil by heads that were preceded by swabbing for more than a day. It has a surface elevation of 434 feet, and the total depth is 3328 feet below sea-level. Gillette & Tarr's wildcat test on the Wofford land, Lowery Survey, Upshur County, has been

## East Texas Production

Daily average production of the Joiner-Kilgore district and the Longview field is shown below, with total number of production wells included:

| | JOINER-KILGORE | | LONGVIEW | |
|---|---|---|---|---|
| Week Ending— | No. Wells | Daily Average Production | No. Wells | Daily Average Production |
| February 18 ... | 22 | 19,090 | 1 | 6,511 |
| February 25 ... | 24 | 24,954 | 1 | 7,044 |
| March 4 ..... | 39 | 51,475 | 1 | 4,578 |
| March 11 ..... | 50 | 75,170 | 1 | 7,170 |
| March 18 ..... | 64 | 75,540 | 5 | 14,021 |
| March 25 ..... | 81 | 104,345 | 6 | 17,769 |
| April 1 ..... | 115 | 119,500 | 11 | 24,990 |
| April 8 ..... | 159 | 165,250 | 16 | 26,000 |
| April 15 ..... | 198 | 210,208 | 25 | 38,180 |
| April 22 ..... | 234 | 239,515 | 30 | 58,480 |
| April 29 ..... | 298 | 271,070 | 39 | 68,715 |
| May 6 ..... | 344 | 216,650 | 46 | 52,250 |
| May 13 ..... | 434 | 208,900 | 58 | 48,550 |
| May 20 ..... | 463 | 242,300 | 70 | 61,510 |
| May 27 ..... | 524 | 279,072 | 86 | 71,017 |
| June 3 ..... | 592 | 284,765 | 111 | 66,710 |
| June 10 ..... | 655 | 282,305 | 126 | 46,729 |
| June 17 ..... | 729 | 302,990 | 142 | 68,370 |
| June 24 ..... | 805 | 274,050 | 161 | 85,880 |
| July 1 ..... | 872 | 256,990 | 189 | 95,270 |
| July 8 ..... | 926 | 285,999 | 219 | 97,765 |
| July 15 ..... | 989 | 318,930 | 235 | 90,400 |
| July 22 .....1,054 | | 394,030 | 258 | 111,150 |
| July 29 .....1,113 | | 461,670 | 292 | 137,840 |
| August 5 .....1,169 | | 512,920 | 308 | 148,048 |

ordered plugged in Del Rio shale at 3952 feet, with a surface elevation of 308 feet. The latter logged Pecan chalk at 2556-3001 feet, but failed to encounter the Austin chalk, or indications of salt water in drilling below the usual water level for the area. Bremen-Woods et al's Robertson 1, a wildcat located in the J. Stephenson Survey and about four miles north of Big Sandy, cored traces of oil in broken formation at 3684-95 feet, but flowed salt water when tested at the latter depth. Plans are to plug back to 3685 feet for further testing. It has a surface elevation of 390 feet.

An effort is being waged by The Texas Company to score a minor westward extension to the Gladewater area with S. D. Walker 1, located on the west bank of the Sabine River and in the St. L. Davis Survey. It cored dry sandy shale with streaks of oil sand at 3573-3588 feet, and has shut down to set casing at the latter depth, which is 3313 feet below sea-level.

## Plug Drilled in Harrison County's Test of Trinity

Marshall, Texas.—Plug was drilled during the past week in Ryan Consolidated Petroleum Corporation's H. H. Key, E. Carrell Survey, near Rosborough Springs, Harrison County's first upper Trinity test, after 6⅝-inch casing had been cemented at 5275 feet at a depth identified as base of the anhydrites. Late last week the test was drilling shale at 5345 feet.

William A. Stephens during the past week abandoned Foster and Billingsley's 1, J. Bowlin Survey, Shelby County, as a dry hole at 1540 feet in shale. The well was started under the name of Joiner and associates as operators.

R. G. Baker abandoned Caver 1, John Lick Survey, Cass County, as a dry hole at 3760 feet in Eagleford shale.

## Sun Line From East Texas To Beaumont in Operation

Longview, Texas.—Sun Pipe Line Company, East Texas division, began filling its 10-inch trunk line, extending from East Texas to Beaumont district terminals of Sun Oil Company and Yount-Lee Oil Company, joint owners of the project, on the night of August 8. Delivery of first oil to the coastal terminals is expected to take place by the middle of the current week. The line required about 200 miles of pipe, exclusive of gathering system, and will have a capacity of 40,000 barrels daily with four main line stations in operation.

The first welding work on this trunk line began June 7 on the north end, which was constructed by Mitchell-Stewart Construction Company. The south half was built by Schmit Construction Company. The four stations are equipped with motor driven centrifugal pumps.

R. W. Pack, vice president and general manager for Sun Pipe Line Company, with headquarters at Beaumont, is in charge of this new East Texas carrier, which will have a field gathering charge of 10 cents per barrel, and a trunk line tariff of 20 cents per barrel.

The two owners of this trunk line have extensive holdings in East Texas, and have adhered to proration restrictions at all times. Sun Oil Company has retained a minimum posted price of 20 cents per barrel for East Texas crude, and has taken on about 45 outside connections that are allowed to produce about 8000 barrels daily under proration.

# EAST TEXAS HIGHLIGHTS

By H. H. KING
*Staff Representative*

### Spot Crude Sales Numerous

Spot crude sales were numerous during the past week and 10 days, and in some instances the announced purchaser was acting under cover for major companies not desiring to be identified as the receiver of oil to be produced in violation of proration, which is being observed only by those that voluntarily do so. Republic Oil Refining Company, owner of a refinery at Texas City, is reported to have booked 100,000 barrels to be furnished by Macmillan Petroleum Corporation at 15 cents per barrel. Pilot Oil Company is reported to have contracted to deliver 500,000 barrels at rate of 5000 barrels daily to Liberty Pipe Line Company. An independent refiner operating a plant between Henderson and Overton was credited with having obtained 200,000 barrels of Joiner area crude at 2½ cents per barrel at the well by making a cash advance. The Texas Company closed deal August 8 for an additional 300,000 barrels to be delivered to its Dallas plant in tank cars at rate of 10,000 barrels daily.

### Gulf Moves Oil to Fort Worth

Gulf Pipe Line Company is now routing a portion of its crude runs from East Texas to Gulf Refining Company's refinery and tank farm at Fort Worth. The balance of the shipments are being moved to the Gulf Coast and to plants of the company in the Middle West and East. Other than a few pump station working tanks Gulf Pipe Line Company has not built storage in East Texas, but is giving right-of-way for this high gravity oil over all other crudes in its system.

### Pipe Line Rates Vary

Varied rate schedules are being adopted by trunk lines leading from East Texas to points on the Gulf Coast, and the lowest is that used by Sun Pipe Line Company, East Texas division, and the joint tariff of Sinclair-Texas Pipe Line Company and Pure Oil Pipe Line Company of Texas. The latter has a rate of 20 cents per barrel from the field station to either Sinco, near Houston, or Smiths Bluff, near Beaumont, with a 10-cent field gathering charge. Sun Pipe Line Company has a similar rate to tank farm and tanker terminals near Beaumont of Sun Oil Company and Yount-Lee Oil Company, owners of the line. Texas Pipe Line Company and Magnolia Pipe Line Company have a similar gathering charge, but a trunk line tariff of 22½ cents per barrel to their respective coastal terminals. Humble Pipe Line Company has a rate of 25 cents per barrel from the field to Baytown and Texas City and 20 cents per barrel to Webster, a tank farm point between Houston and Galveston, with a 10-cent field gathering charge. Gulf Pipe Line Company has applied a field gathering charge of 20 cents per barrel in making north, south and west bound shipments, but is not handling any outside oil.

### Revising Recovery Estimates

Revision of estimates on ultimate crude yield and productive area are being made by engineers of some of the major companies in East Texas as result of close study of developments taking place. Rapid decline in flowing pressure of wells in the areas exposed to a reasonable amount of oil drainage, and spread of water on the west flank of the field have resulted in one of the leading companies forecasting recovery of slightly less than 900,000,000

barrels, and about 92,000 acres of productive territory. Rapid migration of oil and gas from virgin and partially drilled tracts to leases undergoing heavy drainage is believed to have forestalled the inevitable flood of salt water that is destined to sweep the west side of the field in the near future, but at the same time has cut down the recovery from the undrilled locations. Recent failure of completions on inside locations to register normal initial output has given weight to this theory.

### Constantine Plant Operating

Constantine Refining Company, Dallas, will begin operating its 2500-barrel capacity skimming plant, located a short distance southeast of Overton and on the I&GN Railroad, before end of the current week. This company has contracted for crude over a long period, including one contract with Imperator Oil Corporation, which is developing a tract adjacent to the plant site and will deliver 2000 barrels daily for three years, if the production is available.

### Gladewater Plant Progressing

Indian State Oil Company, Allen building, Dallas, is nearing completion on a 1000-barrel daily capacity skimming plant, located at the edge of Gladewater townsite and adjacent to producing wells. The company will probably use Cherokee Chief Oil Company tank car rack in making shipments of refined products for the time being. George F. Ames and associates are also reported to be constructing a 500-barrel capacity plant at Gladewater.

### Secrecy Demanded

Companies engaged in buying large quantities of East Texas crude to be delivered as produced, and in nearly every instance in violation of proration, are exacting promises from operators furnishing the crude not to reveal terms of the deal. Such tactics naturally work to the disadvantage of the small operators, who are unable to learn of the best prices being paid on contracts. The buyers do not want to be exposed to criticism for making unusually low priced deals, and also desire to cover up on prices paid in order to try for a better bargain on the next deal.

### Plan Two Gasoline Plants

Erection of two natural gasoline manufacturing plants in East Texas will begin shortly by Humble Oil & Refining Company in order to utilize a portion of the rich gas being produced from its wells, which register an average gas-oil ratio of about 450 cubic feet gas per barrel of oil when production is pinched to conform with proration. Equipment salvaged recently by Humble Oil & Refining Company by junking plants in North and Central West Texas will be used extensively in the two proposed plants. A plant capable of processing 10,000,000 cubic feet of gas daily will be installed in the heart of the Kilgore field, while a second plant will be built to handle about 3,500,000 to 4,000,000 cubic feet gas daily in either the Joiner or Longview area. About 50 miles of miscellaneous gathering lines will be needed to connect up the company's principal producing leases. Magnolia Petroleum Company authorized construction of a plant in the Kilgore area last spring, but cancelled its plans because of adverse price and market conditions for natural gasolines.

### Many Still Without Outlet

Although nearly all completed wells in East Texas are connected with pipe lines there are a number that are not being provided with a market outlet because of pipe lines having obtained crude offers at lower prices from other connections or are loaded with controlled oil. Operators connected but not being served now find themselves helpless in trying to get relief from other pipe lines, as the latter refuse to make duplicate connections. Another group of operators is complaining that after giving well connections to pipe line companies the latter maintain low pressure pumping units on gathering lines that must buck high pressure on trunk lines, thereby resulting in little oil being moved. Some operators have remedied matters by installing their own high pressure pumps, and have come near breaking main lines with excessive pressures. All buyers in the field are desirous of having as many connections as possible for fear that production restrictions may yet be forced upon the field by the state.

### New Storage Building

Erection of two 55,000-barrel steel tanks has been started by the Petroleum Pipe Line & Storage Company, Tyler, in the Joiner area in connection with the company's program of offering storage facilities to producers on a rental basis, and also to buy oil for its own account. These tanks were purchased from Standard Oil Company of Louisiana, and plans are to build two tanks of similar capacity in the Gladewater area. This storage concern is reported to have contracted to purchase 330,000 barrels of crude at 10 cents per barrel at the well, and the producer is to deliver on demand.

### Skimming Plant Proposed

Construction of a 1000-barrel capacity skimming plant near Camps Switch, located on the Texas & Pacific Railroad and in the Longview area of the East Texas field, is proposed by C. A. Heartfield and Emmett Sedbury, both of Shreveport. C. A. Peairs is to supervise construction work, and serve as plant superintendent. Plans are to have the plant in operation within six weeks.

### Plans East Texas Refinery

K. T. Weidmann, head of a refined oil marketing concern in Minneapolis, is investigating the prospects for locating a 2000-barrel capacity refinery in East Texas to supply a chain of stations in Minneapolis with gasoline that would be delivered by tank cars.

### Humble Buys Storage

Humble Oil & Refining Company has purchased six used 55,000-barrel steel tanks held in stock yard at Minden, Louisiana, by Standard Oil Company of Louisiana, and will add an extra ring to make them 64,000-barrel capacity for service in the East Texas district. Six additional tanks, including some 80's, are reported to have been ordered erected by the company on its East Texas tank farms in the Joiner and Longview areas.

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Longview, Texas.—Shell Pipe Line Corporation's 10-inch trunk line, extending from main field station and tank farm in Gregg County section of East Texas to Houston, a distance of about 198 miles, is more than 50 per cent completed, and will be handling crude before the end of August. Oklahoma Contracting Corporation, Dallas, has the contract to lay this line, and late last week had completed more than 100 miles. The three main line stations are being erected by Shell Pipe Line Corporation.

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El Dorado, Arkansas.—Standard Oil Company of Louisiana has sold three 55,000-barrel steel tanks located in the Smackover field to Lion Oil Refining Company.

**Texas-Empire Line Provides Additional East Texas Outlet**

(*Continued from page* 44)

About 78 miles of 40-pound pipe has been ordered for use in sections of the line leading south from the stations to counteract excessive pumping pressure, and the remaining 130 miles will consist of 33-pound pipe.

The Doherty interests have an eight-inch trunk line extending from the Longview section of East Texas to refineries of Louisiana Oil Refining Corporation, a subsidiary, near Shreveport, and are operating same as Arkansas Pipe Line Corporation. The latter is serving Arkansas Fuel Oil Company, co-discoverer of the Longview area, and also a unit of the Doherty interests. The line to Shreveport has a capacity of 32,000 barrels daily, and also connected to an affiliated line that extends northeast into Arkansas refining centers, thereby enabling the company to take on common carrier business when the new line to the Gulf Coast goes into service. Crude delivered to Port Arthur by the Doherty interests will be shipped by tankers to controlled refining companies on the Atlantic Coast.

Tidal Refining Company, Houston Oil Company and Republic Oil Refining Company, owner of a refinery at Texas City, are reported to be included in the group of East Texas producers and purchasers that will be assigned space in The Texas-Empire Pipe Line Company's trunk line.

## Humble Starts Work on Third Eight-Inch Line to Groesbeck

Tyler, Texas.—Humble Pipe Line Company is starting work on a third eight-inch loop to extend in a southwest direction from its Arp station, located on the Kangerga land, Joiner field, toward Groesbeck, where connection is made with its old trunk line system leading to the Gulf Coast. This new loop will require about 23 miles of welded line, and will increase the capacity to about 50,000 barrels daily to Todd station, Boggy Creek field, where Humble Oil & Refining Company has a skimming plant that is being enlarged in capacity. Humble Pipe Line Company now has a double eight-inch line from Arp via Todd station to Groesbeck, and it is reported that more stations will be spotted on the Todd-Groesbeck unit so as to absorb the increased capacity being made on the Arp-Todd unit.

Humble Pipe Line Company is reported to be planning to install another eight-inch gathering line from the Kilgore area to its main station located southeast of Longview, and another eight-inch feeder line from the Gladewater area to the latter station and tank farm.

## Interior Department Scores East Texas Overproduction

Washington, D. C.—Further administration criticism of the East Texas oil field operations was voiced August 7 in a statement by Acting Secretary of Interior Dixon regarding the Oklahoma-Texas oil situation as it affects the while country.

Declaring that the department is "indirectly" interested in the Oklahoma oil situation through its supervision of Indian leases, the acting secretary said that as at present advised it does not propose to take any action.

The real origin of the Oklahoma oil difficulties lies in Texas—not in Oklahoma, said Acting Secretary Dixon in a statement which asserted that there would be no situation in Oklahoma if Texas would cooperate with the other states in control of her new oil pools.

The East Texas operation represents "the most heart-breaking waste of national resources of a generation," said the statement. "It is driving oil that should be saved for gasoline into use as a substitute for coal; it has created unemployment not alone in the oil industry but among coal miners and a score of other ills. And it does Texas as much harm as everybody else."

Asserting that no one in the country can control Texas production but Texas itself, the acting secretary of the interior concluded that "the selfish and irresponsible interests operating the East Texas pool have demonstrated their ability to prevent control by the state and are apparently determined on wholesale ruin."

The state authorities and legislatures of California and Oklahoma have, under the leadership of their governors, cooperated to prorate their production as urged by the Federal Oil Conservation Board, it was stated at the department. Their new big pools such as Kettleman Hills, California, and Oklahoma City, have been held in control, and "except for the failure of the Texas authorities and the Texas legislature so far to operate by controlling their new oil pool in east Texas, the whole oil situation would have been corrected months ago."

The East Texas field began with 100,000 barrels in January. It is now producing at the rate of 11,000,000 or 12,000,000 barrels per month, according to the department. National production has increased from about 66,000,000 barrels in January to something like 75,000,000 barrels a month now.

In other words, all the other fields in the country have controlled their production but their efforts have been nullified by the unrestrained production of Texas," the department said.

Importers of oil have voluntarily decreased imports from 5,000,000 barrels down to 3,500,000 barrels a month. This effort again has been nullified by the failure of the Texas authorities to cooperate with the industry at large, in the opinion of the department. Crude oil would be a dollar a barrel all over the country except for the action of East Texas, it was stated. The crude oil from this pool is being shipped at 10 to 20 cents a barrel.

"It has thus dragged the whole oil industry down, ruining thousands of independent producers, driving them bankrupt into the hands of the great companies, creating great unemployment and hardships in Kansas, Wyoming, Montana, California and Oklahoma," said the department's statement.

## Magnolia's Oklahoma Crude Stocks Show Sharp Increase

Dallas, Texas.—Magnolia Petroleum Company added to its crude stocks in Oklahoma at average rate of 13,040 barrels daily during July in the face of a sharp decline in its production and purchases in the state. This backing up of crude in Oklahoma was largely due to the company's production and purchases in East Texas having increased from a total of 520,315 barrels in June to 1,053,125 barrels in July, or slightly more than a 100 per cent increase for the field. The company's crude stocks in Oklahoma at the close of July were reported as being 6,642,981 barrels.

This increased activity in East Texas reflected in the total crude runs made by Magnolia Pipe Line Company from fields in Texas, Oklahoma, Louisiana and Arkansas, as daily average runs for July amounted to 109,091 barrels exclusive of common carrier service performed for other companies. The runs for June were 95,569 barrels daily average.

## Ritz-Decker-Garrett Area Has Improved Market Hopes

Wichita, Kansas.—Conditions in the Ritz-Decker-Garrett area of McPherson County were on a decided upward trend so far as market demands are concerned during the last week. Phillips Petroleum Company is purchasing right-of-way for a six-inch line from its Thrall pump station in Section 23s-10e, Greenwood County, to tap western Kansas' most active area, and is reported to have tentatively nominated 4000 barrels daily when the line is completed. At the same time White Eagle Oil Corporation, subsidiary of Standard Oil Company of New York, was testing its new six-inch line into the area. The latter has been taking about 4000 barrels daily tendering through lines of the Texas Production Company, Skelly Oil Company and Empire Pipe Line Company for delivery to its Augusta plant. It is understood that this figure will be increased to 8000 or 9000 barrels daily as soon as the line is put into operation. This will give the area an immediate demand of about 14,000 or 15,000 barrels daily, with an increase of 4000 barrels when Phillips Petroleum Company joins the list of purchasers.

Sudden changes in the market situation during the past two months have made it possible for operators to continue drilling and in several instances lease cancellations have been averted. Early in July, 1931, the outlet was 5800 barrels divided among 69 wells, giving a six per cent allowable production. This figure was decreased to 5½ per cent when new wells were added, reducing allowable production to such a point as to make operation unprofitable even had the price of oil been at a reasonable figure. White Eagle Oil Corporation entered the area in July and since that time allowable production has been on an upward trend. The pool now has an estimated potential of 109,000 barrels from 79 wells. New potentials will be taken during the week commencing August 17. Owners of chat wells have been granted the option of taking potential by swabbing or by use of the decline curve. All Viola lime wells will be pumped 12 hours.

Mid-Kansas Oil and Gas Company completed the largest well of the week when its Unruh 1, SE SE SW Section 25-19s-2w, came in for a potential of 1726 barrels from Viola lime logged at 3387 to 3397 feet. It is making about 50 barrels of water. Twin Drilling Company and Phillips Petroleum Company's Gratton 2, SE SE SE Section 19-19s-1w, was completed for 1346 barrels of oil and 50 barrels of water. Viola lime was encountered at 3417 to 3429 feet. McPherson Oil and Gas Development Company logged chat from 2900 to 2940 feet and completed for 10,750,000 cubic feet at its Lovett 2, CSW NW Section 13-19s-2w, in the eastern portion of the Decker field. Lario Oil and Gas Company's Suffield 2, SW SW SE Section 25-19s-2w, was completed for a potential of 1243 barrels of oil from Viola lime at 3384 to 3394 feet.

### Eastborough Pool

Derby Oil Company's Rimel 1, NW NE NE Section 30-27s-2e, after several months of mechanical difficulty, has been completed for 160 barrels of oil and a like amount of water. Production is coming from a sand believed to be the Misener topped at 3231 and penetrated two feet.

### Northwestern Rice County

Allison and Fitzwilliams under-reamed and set eight-inch casing down to 2942 feet in their Blake 1, NE NE NW Section 9-18s-10w, wildcat test in the northwest corner of Rice County. It is now shut down after encountering two bailers of water in sand at 3055 to 3123 feet.

### Rusk County

Further evidence of the western part of the state as a potential threat for extensive production was brought to light during the week when Dewey and Mitchell's Greenwalt 1, CSW Section 17-19s-16w, set five-inch casing at 3795 feet and had 2200 feet fluid standing in the hole from 3818 to 3835 feet. Top of the conglomerate was encountered at the latter depth and at 3858 feet the fluid column raised 2600 feet in two hours. The last two feet were believed to be dolomitic, making a thickness of 21 feet for the conglomerate. The test is now shut down to erect tankage. Nearest production is approximately 12 miles to the northwest where Danciger Oil & Refining Company completed a 13,000,000-foot gasser in the latter part of 1928. The Greenwalt well apparently is located on the same trend of folding that produced the Fairport, County line and Gorham pools and is about 32 miles southwest of the latter. On the basis of its present showing it should make a 2000-barrel well.

Deitrick and Langston's Purcell 1, NW NW NW Section 33-19s-9w, western Rice County, was drilling below 3362 feet with 2400 feet of fluid, mostly water, in the hole. This wildcat attracted considerable attention two weeks ago when it encountered a nice showing of oil and gas in the conglomerate at 3218 feet. At the time it was reported to be showing from siliceous lime but subsequent interpretations place that formation 100 feet lower, or at 3318 feet. Now more than 44 feet into the lime and showing mostly water, it is very likely to be a failure.

## Drumright A. P. I. Chapter Plans To Inform the Public About Oil

Drumright, Okla.—Citizens of Drumright are due to learn something of the inside of the oil business within a few months if plans now under way by the Drumright Chapter A. P. I., division of production, materializes. The chapter held its regular monthly meeting Tuesday, July 21, on the lawn in front of its community hall. Although attendance was much smaller than usual, it was a worthwhile session with the introduction of several new pieces of equipment by the inventors.

Mr. Schuyler of Schuyler Manufacturing Company of Duncan, Oklahoma, demonstrated a self-adjusting expanding cement plug for use in cementing bottom water and a paraffin breaking traveling valve which is now being used in a number of Southern Oklahoma wells.

## Cement Pool Well at 9107 Feet; All Sands Are Carefully Cored

Cement, Okla.—Mid-Kansas Oil and Gas Company and Ramsey Petroleum Corporation were drilling below 9107 feet in their Preston-Culp 6, NW NW NE Section 6-5n-9w, in the western portion of the Cement pool. Drilling is now in an eight-inch hole using four-inch drill pipe, which now makes up more than 100 stands. Operators are coring every sand as a precaution against passing up important showings and also to secure a dependable record of the lower Pennsylvanian series.

At the present depth about 2½ hours are required to pull out of the hole and about six hours to make a "round trip." Size of the hole will permit the setting of two additional strings of casing which should make it possible to continue drilling as deeply as the operators care to test. Nine-inch casing was set and cemented at 5513 feet and there is now approximately 3600 feet of open hole.

# South Texas Field Developments

**EARL POST,** ***Staff Representative, San Antonio, Texas***

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## Small Producer Completed For 200 Barrels at Refugio

San Antonio, Texas.—One producer, one abandonment and several new operations featured activity in the Refugio field during the past week.

Houston Oil Company has finally been successful in finishing its Pratt-Hewitt-Rooke 6 at total depth of 3705 feet for an initial flow of 200 barrels. The well was sidetracked at 3285 feet after the 5 3/16-inch casing parted at 3678 feet. The sand is logged at 3694-3704 feet.

Gulf Coast Drilling Company missed all the deep sands in its Lambert 1, in the eastern side of the field, and was abandoned as a dry hole at a total depth of 6536 feet.

Mission Drilling Company's O'Brien 1, workover, is waiting on cement at 6450 feet. The well originally was completed as a producer at 6449 feet, but was whipstocked at 5000 feet and drilled to the present level.

Moody-Seagraves Producing Company has constructed a derrick and is preparing to work over its Strauch 1, on block 8. The company's O'Conner 4, completed recently as a salt water well at 6435 feet, has been plugged back to 6431 feet and is waiting on cement.

Pearson Properties' Ryals 3, drilled deeper from 5488 feet, where it was a producer, is due to hit the lower sand shortly. It is now drilling at 6240 feet in shale.

L. L. Smith, Inc.'s townsite well in block 87, probably will be shot preparatory to working over. It also is in the deep horizon.

United Production Company has its W. J. Fox 1-B in process of completion at total depth of 5879 feet. Casing is set at 5865 feet. The same operator's Lambert 4 is drilling in sticky shale at 3525 feet and O'Brien 6 is waiting on cement after resetting casing at 6438 feet. The well's depth is 6451 feet.

## Two-Mile Northwest Extension To Saxet Field Seems Likely

San Antonio, Texas.—A two-mile northwest extension to the main Saxet field, Nueces County, looms as Houston Oil Company prepares to complete its Harrel 2, located in the southwest corner of the John E. Dunn Survey No. 312. The well has set 5 3/16-inch casing at 4081 feet and is waiting on cement.

This well will be remembered as the one that blew in wild in sand at 2725-40 feet last May and ran wild for several weeks before being controlled. Drillers worked with the well many weeks before finally controlling it enough to drill deeper. The well, in addition to opening the 2725-40 foot level, was the first test to be successfully completed in a sand at approximately 1650 feet. The Harrell 1 blew in wild, wrecked the derrick and cratered from this level.

Houston Oil Company's Morgan 2, one of the first producers at 4095 feet again is attempting to complete. It was drilled to 6375 feet, plugged back to 4097 feet, where it tested salt water and again plugged back to the present depth of 4084 feet.

Gulf Coast Oil Company's Harrell 1, Section 311, block 32, has cored a sand at 4856-63 feet, which is showing both oil and gas. The well is three-fourths mile due north of the main production. It made a small producer at the regular level.

## Seek to Deepen Cosden Pool Well to 6000 Feet

San Antonio, Texas.—Negotiations are being made between the receivers of Cosden Oil Company and Rowan and Moore for the deepening of their Freeland 2 in the Cosden pool, Pettus, Bee County, to a total depth of 6000 feet. The well is now shut down at 4297 feet after showing salt water in the regular horizons.

Should the well be deepened to the proposed depth, it will be the first to test the lower horizons in the immediate district. Other wells have been drilled to approximately this depth in the wildcat sectors of Bee County, but none of them has been adjacent to the field.

The Freeland well showed a sand at 3696-3706 feet, which showed 270 feet of salty mud on a drill stem test. It later showed 14 fourbles of salt water at 3825 feet. A third sand at 4290 feet, which was not tested, showed salt water.

This well is located 1000 feet from the east line and 600 feet from the south line of the John Pace Survey and 1600 feet west of the Cosden pool's proven area.

The only other operation in the Pettus field is a semi-wildcat of United Production Company, its Ray 39, north and east of the original field, which is drilling in shale at 3032 feet. It is in the T. Hanson Survey.

## Latest Mount Lucas Field Test Proves Unsuccessful

San Antonio, Texas.—While two deep oil producing horizons have been uncovered in the Mount Lucas field of Live Oak County, Houston Oil Company is still unsuccessful in proving any real trend of production. The latest failure is the company's Cartwright 14, Sandman Survey, which is drilling at 4650 feet after coring a sand and shale formation at 3724 feet, more than 70 feet below the pay level of the Cartwright 23, a 100-barrel producer. The well is being carried to the level where the Booth wells found production.

The Cartwright 14 is 1300 feet west of the Cartwright 23 and formerly was a producer in the gas sand just above 2200 feet.

Catlett and O'Neill are drilling their Hatcher 1 at 4460 feet. The well is located in the James McGloin Survey, Live Oak County, four miles northeast of the field.

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San Antonio, Texas.—Witherspoon Oil Company is completing its Knapick 1 in the Cooksey unitized block, Bexar County, in the Taylor marl. The well has 6⅝-inch casing set at 1307 feet. This is one of the tests to be drilled by the company since taking over the block for development purposes. The pool was discovered last year by Penn Oil Company's Cooksey 1 on the Rialls Survey. So far, all producers have been on this survey.

## Victoria County Test Penetrates Second Sand Below 3000 Feet

San Antonio, Texas.—The Texas Company has discovered the second sand below 3000 feet in its McFadden 3, Victoria County, but is drilling ahead in search of oil. The latest horizon is at 3079-86 feet, where the well showed 800 pounds pressure of dry gas in two minutes through a three-eighths-inch choke. Several days prior, the test at 3010-16 feet registered the same pressure in three minutes through a three-eighths-inch choke. Both sands are new for this district. It is now 3215 feet deep.

The well is 2675 feet north and 30 degrees west of No. 2, which was completed as a large gasser at 2005-25 feet. At this level the well ran wild for some time, but was finally controlled. The McFadden 3 tested 800 pounds pressure in three minutes on a three-eighths-inch choke at 2048 feet, corresponding to the level in the McFadden 2.

The McFadden 3, in the northeast corner of the James M. Rine Survey, is four miles west of the McFadden field, which has gas producing levels at about 3500 and 3700 feet.

In the main McFadden district, United Production Company has spudded its McFadden 5-A, C. L. Mann Survey, 2800 feet northeast of McFadden 4-A, a gas producer.

## Humble to Extend Line from Kohler Area to Duval County

San Antonio, Texas.—A combination for and six-inch pipe line is being extended from the Kohler field of Duval County to the Schoolfield-O'Byrne field south extension by Humble Pipe Line Company. The line is a total distance of 21 miles and connects with the properties of Duval Oil Company, including the Bishop Land and Cattle Company tract, Section 135. The oil from these wells will be run to Humble Oil & Refining Company's docks and tank farm at Ingleside, where it will be delivered to Crown Central Petroleum Company.

Magnolia Pipe Line Company is at present serving the field with pipe line facilities.

## Another Producer Probable In Pool of Bastrop County

San Antonio, Texas.—Another producer in Texas Petroleum Company's (Schimmel and Batts) serpentine pool of Bastrop County, seems probable in its Trigg 3. The well topped the serpentine at 1365 feet and has drilled 1430 feet, where it is showing considerable oil and gas. The well has 6⅝-inch casing set on top of the formation and is preparing to complete.

The well is located 600 feet northwest along the line from the Williams 1, thence 175 feet at right angles to that line in the J. Doyle Survey. The well is about 1800 feet north of the Ferguson 1.

Approximately 1900 feet north of the Trigg 3, the company completed the Trigg 1 and 2 as dry holes.

## Unsuccessful Efforts Made to Work Over Goliad County Well

San Antonio, Texas.—Continued efforts to work over the well have failed to increase the production in Neuhaus Drilling Company and Southern Crude Oil Purchasing Company's Pettus 1, which recently opened the second oil pool in Goliad County. The well at last reports was flowing about 10,000,000 cubic feet of gas, spraying about 50 barrels of 45.6 gravity oil, and was showing some water.

The well was originally completed at depth of 4298 feet, but was then drilled to 4308 feet. It was then plugged back to 4286 feet, its present total depth. The well showed a sand at 4282-87 feet, but registered shale the remainder of the way down.

The well's first production was about 110 barrels of fluid, 60 per cent salt water. Since the recompletion, the well has not had a chance to finally clear itself and operators have not announced if the fluid is salt water or drilling fluid with the oil.

It is located in the Maria de Jesus Ybarbo Survey and is about midway between the new Slick field and the Pettus field, the latter located in Bee County.

## Another Test is Planned for Schoolfield and O'Byrne Area

San Antonio, Texas.—Duval Oil Company has made location for its Bishop Land and Cattle Company 3 in the southwest extension of the Schoolfield and O'Byrne pool of Duval County. The test is preparing to rig up. The company has several good producers in the field at this time.

The new location is 330 feet from the north line and 1650 feet from the west line of Section 135.

Two and one-half miles east of the field, John F. Camp and Southern Crude Oil Purchasing Company have been encountering several salt water sands in their Hubbard 1, Section 75. The well showed salt water at 2501 feet and again at 2529-43 feet.

L. E. Lockhart is preparing to resume drilling in his Sutherland 1, Section 511, eight miles south of the Schoolfield and O'Byrne pool. The well was spudded, but shut down for water.

## Discover Second Deep Sand At Chalk Hill, Archer County

Wichita Falls, Texas.—Discovery of a second deep oil horizon in the Chalk Hill section of Archer County by Deep Oil Development Company's L. F. Wilson 1, Tract 5-A, is to result in a string of 8¼-inch casing being set near the 3600-foot level to test show of live oil encountered in sand at 3614-18 feet. This well logged dry sand at 3618-40 feet followed by a lime formation at 3640-45 feet, then a water sand at 3645-50 feet, with a surface elevation of 981 feet. It is a west offset to the same company's discovery well in the 2200-foot horizon, which showed good for about 2000 barrels high gravity oil daily in the above deep test, which is contracted to go to 5000 feet to fulfill lease obligation.

Promise of a commercial producer from Jack H. Martin et al's Logan-Kemp townsite 1-A, located in southern Wichita County and about one mile south of the discovery well of Deep Oil Development Company on the Munger farm in broken formation at 3600-3900 feet, holds good even though it was drilled into a water sand between 3901 and 3933½ feet. Martin et al's deep test obtained hole full oil after coring broken sand and lime formation at 3854-3900 feet, and will be plugged back to 3899 feet. Wayne H. Hammon et al's J. H. Bradley 3, located in the same area, is carrying some oil in the hole while coring hard lime below 3860 feet. The first oil saturated lime was encountered at 3726-57 feet, with a surface elevation of 1013 feet. The owners anticipate a more prolific oil horizon below 3900 feet, and are coring deeper before casing the hole, which has been carried to its present depth with only 110 feet of 10-inch surface pipe.

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# Gulf Coast Field Developments

**JACK LOGAN,** ***Staff Representative, Houston, Texas***

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## Uncovers New Shallow Sand At 4509 Feet at Barbers Hill

Houston.—A new shallow sand which probably will result in the immediate drilling of at least three offset wells in Barbers Hill field was proven productive this week when The Texas Company completed its J. F. Wilburn 6 for an initial yield of 3000 barrels at 4509 feet. This increased later to 3700 barrels.

Wilburn 6 is located on the east flank of the field, close in, and almost far enough north to be classed as one of the northeast flank wells. None of the wells drilled on that flank of the field has produced from the 4500-foot sand, although the Wilburn producer is flowing 24 gravity oil. All previous production in this section of the field has been obtained from the 5200-foot level.

Humphreys Corporation is the first to announce officially an offset to The Texas Company's Wilburn 6. Its Kirby H 8 has been staked 70 feet north of the north line of The Texas Company's Wilburn lease and 370 feet west of Humphreys Corporation's Kirby H 6.

Several wells in Barbers Hill field are due for completion during August, barring accidents. Sinclair Consolidated Oil Company's John H. Smith 3 has reached the interesting depth of 4965 feet. The Sun Oil Company has two wells on the John Smith property well below the 5300-foot level. The Texas Company is coring at 5550 feet in E. H. Winfree 2.

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Houston.—There was only one completion in coastal Louisiana during the week ending August 8. That was The Texas Company's State Lake Barre 6, located in the Lake Barre region of Terrebonne Parish. State Lake Barre 6 had an initial production estimated at 2150 barrels, coming from 3800 feet. The well originally was drilled to below 4000 feet, but was plugged back for production.

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Houston.—Layne et al's Wisdom 6-A in the Damon Mound district of Brazoria County was completed this week for 30 barrels of basic sediment and water. Wisdom 6-A, which had a total depth of 2404 feet, plugged back to 2383 feet and set blank screen from that depth up to 2328 feet.

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Houston.—Two shallow tests of Texas Gulf Sulphur Company in the Moss Bluff district of Liberty County were abandoned last week. They were McFaddin 5 and McFaddin 6, both in the J. McFaddin Survey. McFaddin 5 was abandoned in salt at 1167 feet after having topped the salt at 1151 feet, while McFaddin 6 was abandoned in gypsum at 897 feet.

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Houston.—Three wildcat wells were abandoned during the past week in Washington County, leaving only one active test in that county of the Texas Gulf Coast. Brenham Salt Dome Deep Test Oil Company, drilling the most important of the three from a depth standpoint, abandoned Kramer 1 at 4100 feet. The test is located near Brenham. Yegus Oil Corporation, prospecting three miles north of Independence, abandoned Graves 1 in hard shale at 2641 feet after having spent some time at that depth on a fishing job. The third abandonment was Fisher et al's H. F. Scholtze 1, located 10 miles north of Brenham. Scholtze 1 had a total depth of 390 feet.

Houston.—Frank Warner of the safety division of the Mid-Continent Oil & Gas Association, Tulsa headquarters, called an informal meeting of Gulf Coast safety engineers here, at the Rice Hotel, early last week for the purpose of further promoting fire prevention in the field. A two-reel picture showing how the Sinclair Cole well near Gladewater, Texas, was controlled, was shown.

## Bolsa Chica Announces Contract With Superior

Los Angeles.—Directors of Bolsa Chica Oil Corporation have announced details of the contract between the company and Superior Oil Company, whereby the latter agrees to develop certain holdings of the former. No assignment of property was made, but Superior Oil Company agrees to perform a large amount of work under terms of the contract. Bolsa Chica Oil Corporation retains all of its properties by virtue of the contract, but extensive drilling will be done by Superior Oil Company. Until all of these tests are drilled, no compensation will be paid, unless the Superior Oil Company chooses to accept proceeds from production of such wells as its compensation.

Under the terms of the contract, Superior Oil Company will deepen Augur 1 at Coal Oil Point into the Sespe formation, with a complete production test; drill a deep well on the Hartman lease in the Ventura Avenue field to test the deep zone recently discovered by Associated Oil Company on a neighboring lease; perform work necessary for testing Ferguson 24-1 on the North Dome at Kettleman Hills in the event that either Petroleum Securities Company or Standard Oil Company obtains production in wells now being drilled.

In the event production is obtained in the deep well drilled on the Hartman lease at Ventura Avenue, Superior Oil Company will have the right to drill other deep wells on the lease; and in the event Petroleum Securities Company and Standard Oil Company fail to make producers of their wells on the Middle Dome at Kettleman Hills, Superior Oil Company may proceed to drill a well at any location it chooses on the 1560 acres.

## Develops Carbon Dioxide Structure in Washington

Walla Walla, Wash.—A partially developed structure in Klickitat County, Washington, has been leased for 99 years by Northwestern Natural Gas Company which plans an extensive program of development of the structure's carbon dioxide gas resources. There has been $200,000 spent in the development on this structure. Four wells were drilled and a hydro-electric plant installed. The gas is free from hydrocarbons or other impurities.

Northwestern Natural Gas Company will spend about $100,000 this year in drilling new wells and increasing the capacity of the hydro-electric plant. Additional ice-making machinery is to be installed at once and its products marketed. Plant at this time has a daily capacity of 5½ tons

# Louisiana--Arkansas Field Notes

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## Gets Oil Show in Test Five Miles North of Zwolle Field

Shreveport.—R. L. Gay, Trustee, during the past week tested four fourbles of light oil and five fourbles of salt water in a drill stem test in Long Bell Lumber Company A-1, NW NW Section 10-8-13, five miles north of the Zwolle field. The drill stem test was made from 3585 to 3638 feet. The test is now shut down waiting orders. Several wells drilled to 3600 in the general area of this well before and since discovery of the chalk rock oil horizon at Zwolle showed oil but none has been a commercial well.

During the past week Loring Oil Company cemented 9⅝-inch casing at 2525 feet in Bowman-Hicks 17, Section 16-7-12, 1½ miles southwest of production in the southeast part of the Zwolle field. This well started as a 6000-foot test, recently shot oil over top of the 122-foot derrick when a drill stem test was made. If the well is a good producer at present level it will not be taken deeper. Total depth is 2566 feet.

## Seeks Major Companies' Aid In Deepening Arkansas Test

Shreveport.—No definite plans have yet been completed for deepening Lion Oil Refining Company and associates' Guy P. Haynes A-9, SW NE Section 4-16-15, Union County, Arkansas, Smackover's first 5000-foot test, which was shut down a fortnight ago at 5021 feet in shale. Efforts are being made to enlist aid of major companies in continuing the test to 6000 or 7000 feet. In a core from 4999 to 5003 feet the test showed red shale and rathole was made to 5021 feet in the same formation where the test was shut down.

One new location was announced in Arkansas during the past week. Zepp Oil and Gas Company built derrick for W. E. Hillman 2, SE NE Section 20-10-13, Dallas County, in the same section where E. C. Brewer, Trustee's Hillman 1 is shut down in white sand at 2869 feet.

Crawford Drilling Company has abandoned location for Vaughan 1, Section 25-19-25, in LaFayette County. W. E. Noel and associates have spudded in Dickson 1, Section 11-20-27, Miller County, and late last week were drilling at 1600 feet.

## Marine Oil Shuts Down All Wells in Arkansas

El Dorado, Arkansas.—Marine Oil Company which several weeks ago made a complete shutdown of its wells in the Urbana district of Union County, during the past week shut down 46 more wells in South Arkansas with a combined daily production of 400 barrels, giving this company a 100 per cent shutdown in Arkansas; 37 of the wells just shut down were in Smackover and nine in Lisbon. The daily yield from the 37 Smackover well is 375 barrels and from the nine Lisbon wells, 25 barrels.

McMillan Petroleum Company is negotiating with Hollyfield and McFarlane, it is reported, for the purchase of 75,000 barrels of heavy Smackover crude which the latter have in storage in the Smackover field. It is reported 50 cents per barrel was offered for the oil.

Woodley Petroleum Company has severed its pipe line connections with the McMillan's tank farm in the Smackover field and is now storing 265 barrels of heavy Smackover oil formerly run to the McMillan.

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Shreveport.—Only one completion was recorded in North Louisiana during the past week, this being Southern Carbon Company's Rosengrant and Ducomb 4, Section 19-7-6e, Richland Parish, which gauged 7,336,000 cubic feet of dry gas with 765 pounds pressure at 2450 feet, in shale. The only new location made in North Louisiana during the week was the same company's Rosengrant and Ducomb 9, Section 18-17-6e, Richland Parish, where rigging up is already under way.

## Completes Another Dry Gasser in Jackson Area

Jackson, Mississippi.—Love Petroleum Company's Maley 3, 2770 feet east and 950 feet south of northwest corner Section 15-5-1e, Hinds County, in the southwest part of the Jackson gas field was completed during the last week in chalk at 2445 feet with elevation 268 feet, making an estimated dry gas daily yield of 35,000,000 to 40.000,000 cubic feet. Black shale was topped at 2353 feet and the chalk at 2440 feet. The gas is already under contract to be sold to United Gas Company.

This well is a quarter of a mile south and slightly west of Love Petroleum Company's Maley 1 in the same section which made considerable oil of about 13 gravity along with some salt water and gas, several months ago.

Ohio Oil Company has failed to receive 6⅝-inch casing for setting in Cantrell 1, NE NE Section 16-15-5e, Clay County, northeast Mississippi, 30 miles southwest of the Amory gas field. It was previously reported the pipe was being run. This test had a strong gas show in 18 inches of sand in the Mississippian series at 4477 feet. Meanwhile the hole is reported caving.

Community Oil & Gas Company's Swearengen 1, Section 34-6-1e, Hinds County, in the center of a residential area near Millsaps College, with elevation 356 feet, topped the black shale high at 2378 feet and is awaiting arrival of 6⅝-inch casing. Total depth is 2453 feet.

One new location was made in the Jackson field during the week, this being J. A. Alexander, Trustee's Wright 1, SE SE Section 12-5-1e, Rankin County.

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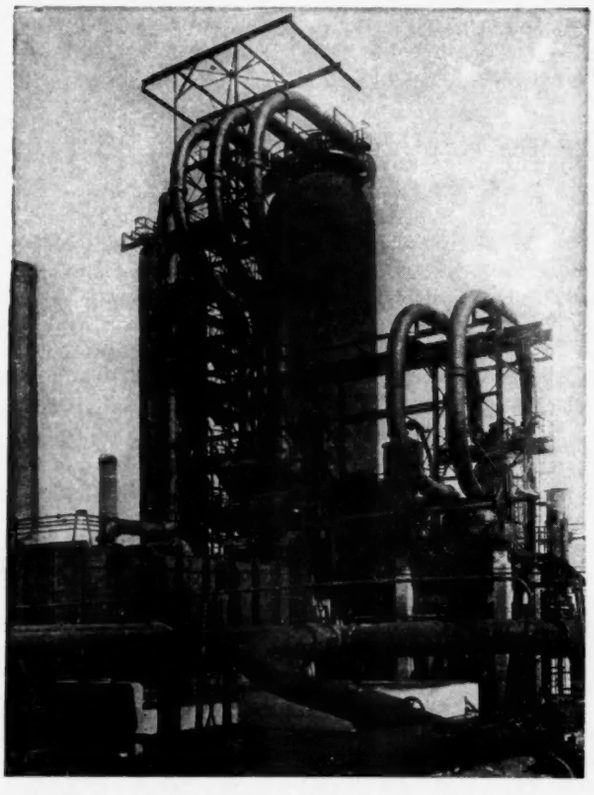
Jackson, Mississippi.—With actual laying of an eight-inch welded gas line from the Jackson gas field at Hattiesburg, Mississippi, a distance of 90 miles already under way, by Halle Construction Company, Monroe, Louisiana, for Public Service Corporation of Mississippi, which has the franchise to furnish gas to Hattiesburg, the latter company will be asked before August 15 for construction of a gas distribution system at Hattiesburg. The system must be completed by October 15, under present plans. Several miles of the line between here and Hattiesburg have already been laid.

GULF

# Modern Methods Make Modern Gulf Products



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Paraffine and Coastal Crudes

Gasoline · Lubricating Oils

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GULF REFINING COMPANY

*General Sales Offices:* PITTSBURGH, PA.

# INTERNATIONAL PETROLEUM
## IN REVIEW

*Wietze Field, Germany. D. E. A. oil mine in background*

### *Operations at Low Ebb Throughout the World*

There has never been a time since the commencement of large-scale oil operations in foreign countries when drilling activities generally were at lower ebb than at present.

Such a statement would stand wholly unchallenged, were it not for the inadmissible exceptions of Soviet Russia and East Texas.

It appears at this mid-year period that any substantial production increases which may show when the year's totals are computed will be chargeable to the Bolsheviki of Russia and East Texas.

Rigs have been stacked and engineers, drillers, and technicians have been sent home to the United States, Great Britain, and Holland from all points of the compass—from Trinidad, Venezuela, and Colombia, from Roumania and Burma, and from Sumatra, Java, and Borneo. There is not enough drilling being done by producers in these countries to sustain their reserves and, over long periods, to continue to supply their average shares of the world's demands. Were it not for the fact that producers in all of these countries possess fairly substantial reserves of shut-in or restricted production, as a result of the great five-year boom which ended last year, it would be impossible for them to sustain even their present average output, restricted though it is. It is, of course, not necessary that reserves of available oil should be maintained in such great volume as at present; and this present suspension of drilling is without doubt the most potent remedy which could be applied.

Other facts and factors entering into this situation, however, are of tremendous speculative interest.

What does the future hold in store? for American producers? for the socialized oil industry of Russia? for the great international oil interests? for independents?

It has been said by a leader of the industry that in co-operation lies the only hope of salvation—co-operation on a world-wide, international basis. The spirit of co-operation is most conspicuously absent in Russia and in East Texas.

Other operators, some early as a result of wisdom and foresight and others belatedly by force of necessity, have curbed their individual ambitions, restricting the production of surplus oil in some 10 different South American and Asiatic countries—counting only those countries whose oil resources are sufficiently large as potentially to affect world markets.

It is not within the scope of this article to discuss the state of affairs in America. Some thought, however, must be given to America's position with respect to her foreign competitors.

Russia's capacity for mischief is far greater than her capacity for production, of oil or of any other commodity. It is no exaggeration to say that one barrel of Russian oil actually exported is equivalent in its effect upon the world markets to 10 barrels of oil from any other source. Such is the nature of the Russian complex with which the world is possessed that a country capable of supplying less than 10 per cent of the world's requirements of petroleum nevertheless is able to drive the whole industry into panic.

A study of the foreign situation indicates that no important statistical changes are in prospect, save in Russia, Venezuela, and Colombia.

Soviet authorities claim the usual advances. Increases

reported average around 2½ per cent per month; but it is notable that producing agencies are falling below their current quotas.

Venezuelan and Colombian production has been reduced substantially, as a result of the voluntary restriction of imports into the United States by producers operating in the former country and of independent action on the part of Tropical Oil Company, of Colombia.

Production has been stabilized at averages approximating those of 1930 in Trinidad, Peru, and Burma.

The prospect is that the current year's output will fall below last year's figures in Argentina, Poland, and the Netherlands Indies.

Production was abnormal during the first half of the year in Roumania, but the evidence is that a more sane policy of co-operation and restriction may be followed during the remainder of the year.

Germany, undoubtedly, will report an increase when the year's totals are cast up, unless political and economic disturbances during the last half of the year should offset gains made since January 1.

### *Oil Discovered In Chile*

Valparaiso, Chile. — The discovery well of the Magallanes district, from which a flow of oil, gas, and water was reported early in June, has been re-opened for the purpose of obtaining samples for analysis. Distillation tests made in a local laboratory are reported as having indicated that the oil is "of excellent quality" although no other particulars are given.

No storage was available, and a considerable portion of the well's test flow was lost. It is reported, however, that a quantity of about 14 barrels was saved in such containers as were available at the site.

The well has again been shut in, pending construction of storage tanks and other facilities for the utilization of its production.

Drilling is being continued in another well at Tres Puentes.

### *Scotch Shale Industry in Difficult Position*

London, England. — The effect of the depression and the decline in British gasoline prices upon the Scottish shale oil industry was recently outlined by the chaiman of Scottish Oil Ltd., at the company's twelfth annual meeting here, according to Vice Consul Edwin B. Earnest at Edinburgh, in a report made public by the Commerce Department.

"The losses being sustained by the shale companies are now so serious that their resources—already considerably depleted—will not permit of operations being maintained on the present scale, and the directors have been forced to the decision that if any portion of the industry is to be saved operations must now be restricted to those units where losses are least," the company's chairman stated.

He pointed out that the value of products of a ton of shale now only nine shillings three pence (approximately $2.22) compared with 12 shillings six pence (approximately $3.00) before the war, while costs of production have risen. It was announced that the new plant, under erection at the Grangemouth and Uphall refineries a year ago, is now being used or will soon be in operation. A cracking unit at Grangemouth is reported to be giving satisfactory results, and a similar unit at Uphall has been working smoothly for some time.

### *Company's Venezuelan Production Curtailed*

Maracaibo, Venezuela.—Daily average production of Venezuelan Oil Concessions, Ltd., Royal Dutch-Shell subsidiary operating in the Maracaibo district of Venezuela, is reported as having averaged 12,936 tons (approximately 90,500 barrels) per day during the week ended August 1. Current output of this company is 12 per cent below averages for the same period of last year, as a result of restriction of drilling and curtailment of output.

### *Digest on Mining Laws of East Indies*

The United States Bureau of Mines, of Washington, D. C., has issued a digest of the mining laws of the Netherlands East Indies, compiled by E. P. Youngman of the rare metals and non-metals division, which is worthy of space in the libraries of oil lawyers, engineers interested in foreign operations, and executives of companies operating on international scale.

The oil laws of the Dutch East Indian colonies, rights of foreigners, etc., are fully discussed. The pamphlet is issued under the title "Mining Laws of the Netherlands East Indies," Information Circular No. 6451.

### *Geophysical Abstracts*

Geophysicists and others interested in that branch of petroleum technology will be interested in a series of geophysical abstracts compiled under the direction of Frederick W. Lee, senior physicist, United States Bureau of Mines, Washington, with the assistance of outstanding American, Italian, Russian, Canadian, Mexican, and European authorities.

Copies may be obtained from the Bureau of Mines at Washington. The June, 1931, issue is identified as Information

### *British Gasoline Consumption*

Great Britain consumed more than 1,000,000,000 Imperial gallons (approximately 1,209,000,000 U. S. gallons) of gasoline during the year 1930, consumption having increased by about 10 per cent over that of 1929, according to a booklet issued recently by the (British) Society of Motor Manufacturers and Traders.

The Society's experts estimate that the United States is within 5.73 degrees of the saturation point in the use of automotive equipment, whereas Great Britain is 22 degrees below that point.

### *Russian Gasoline Reaches New Zealand*

Wellington, New Zealand.—A small shipment of Russian gasoline arrived here recently, and has been tried in motor vehicles in the city, according to trade information received in the Department of Commerce from Trade Commissioner Julian B. Foster. There is no special embargo on Russian goods coming into New Zealand, and the local trade expects that the test of Russian gasoline in Wellington will be followed by negotiations for its importation in quantity, the report indicates. If handled regularly it would involve the formation of an organization to install bulk stations, trade circles believe.

During April, 1931, New Zealand imported 300,223 barrels of gasoline and kerosene, the bulk (248,625 barrels coming from the United States. The next largest amount came from the Netherland East Indies, but several sources contributed. April imports of mineral lubricating oils totaled 5129 barrels, with 2523 from the United Kingdom and 2421 from the United States.

# Completions for Past Week in U. S. Fields

▼ ▼ ▼

## TEXAS

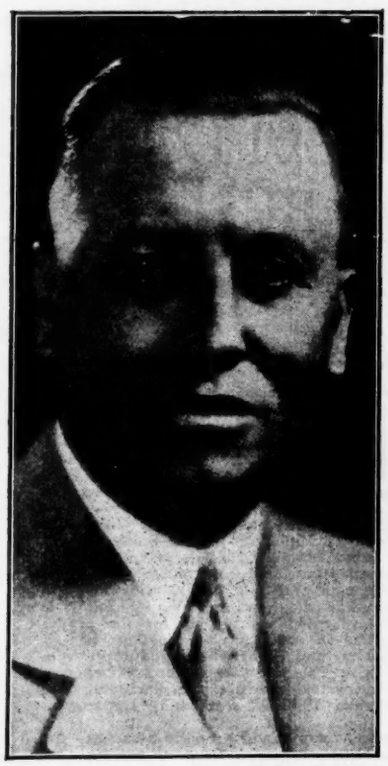
### CENTRAL EAST TEXAS

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| JOINER FIELD— | | |
| F-H-E Oil Co., Thompson 1-C | 7200 | 3717 |
| Golding-Murchison Oil Co., J. Lee (45½-ac) 1 | 10,000 | 3748 |
| Gulf Prod. Co., Keeling 4-A | 3000 | 3790 |
| W. L. Maxwell 1 | 5000 | 3719 |
| W. L. Maxwell 2 | 4500 | 3712 |
| W. Shaw (67.2-ac) 2-A | 2000 | 3750 |
| Humble O&R Co., Jas. Fuller (115-ac) 2 | 8500 | 3765 |
| W. B. Key 1 | 12,000 | 3744 |
| H. A. Piercy 1 | 9000 | 3765 |
| S. A. Plowman 9 | 6000 | 3735 |
| C. J. Thompson 6 | 6500 | 3682 |
| V. Turner 1 | 10,000 | 3767 |
| Macmillan Pet. Corp., M. A. Thrash 1 | 7000 | 3775 |
| Magnolia Pet. Co., Roy Loosier 3 | 12,000 | 3760 |
| R. G. McIntyre Drlg. Co., M. L. Thompson (10-ac) 1 | 5500 | 3784 |
| Geo. L. Pace et al, A. F. Deason (20-ac) 2 | 4800 | 3746 |
| Panhandle Ref. Co., Pool 1 | 4000 | 3777 |
| Sinclair O&G Co., A. S. Jarvis (256-ac) 1-C | 5000 | 3676 |
| Mayfield 2-A | 5000 | 3656 |
| Mayfield 3-A | 3000 | 3803 |
| Mayfield 2-B | 3500 | 3615 |
| W. D. Kinney 5 | 6000 | 3674 |
| Dora Wright 1 | 6500 | 3758 |
| Dora Wright 2 | 8500 | 3743 |
| Mrs. R. G. Wright (107.62-ac) 2 | 7500 | 3680 |
| Sun Oil Co., Mrs. A. V. Ritch (54-ac) 1-B | 6500 | 3685 |
| The Texas Co., J. W. Wilson 1 | 3600 | 3676 |
| Paul Vitek Estate et al, G. W. Eaton 5 | 5000 | 3810 |
| KILGORE FIELD— | | |
| Finley & Dyke et al, G. H. Blackman 1 | 7500 | 3666 |
| Golding-Murchison Oil Co., L. F. Griffin 1 | 7500 | 3600 |
| Humble O&R Co., R. H. & W. L. Laird 3 | 8000 | 3611 |
| Lambert & Hynes, D. Beall (15-ac) 1 | 8000 | 3608 |
| Magnolia Pet. Co., Griffin Davis (40-ac) 5 | 10,000 | 3644 |
| L. A. Griffin ((44½-ac) 1 | 11,000 | 3572 |
| M. B. Hughey (80-ac) 2 | 15,000 | 3515 |
| Jessie King (33¾-ac) 2 | 8000 | 3700 |
| C. C. Still (100-ac) 4 | 9000 | 3668 |
| Martin & Sladek Pet. Corp., R. F. Russell (17-ac) 1 | 9000 | 3790 |
| Frank Russell et al, J. S. Powers (8-ac) 1 | 9000 | 3767 |
| Sinclair O&G Co., A. A. King 6-A, Tract 1 | 9500 | 3493 |
| Stanolind O&G Co., J. R. Beall 2 | 6000 | 3661 |
| Sun Oil Co., J. R. Beall (180-ac) 5 | 8000 | 3604 |
| J. R. Beall (180-ac) 6 | 8000 | 3605 |
| C. H. Hilburn-Chas. Lloyd (133-ac) 3 | 10,000 | 3637 |
| C. H. Hilburn-Chas. Lloyd (133-ac) 4 | 7500 | 3658 |
| C. H. Hilburn-Chas. Lloyd (133-ac) 5 | 7600 | 3666 |
| The Texas Co., M. T. Cole 2 | 7000 | 3568 |
| LONGVIEW FIELD— | | |
| Clark & Cowden Drlg. Co., J. M. Christian 1 | 6000 | 3646 |
| Gulf Prod. Co.-E. L. Smith Oil Co., Tom Clemmons 2 | 12,000 | 3675 |
| Magnolia Pet. Co., H. Hampton 5 | 10,000 | 3647 |
| W. R. Nicholson (50-ac) 1 | 10,000 | 3641 |
| Sinclair O&G Co., Akin 1 | 8000 | 3596 |
| Sun Oil Co., J. W. Akin (166.2-ac) 2 | 9100 | 3612 |
| J. C. McKinley (168-ac) 2 | 9000 | 3678 |
| Yount-Lee Oil Co., M. B. Harley 1 | 8500 | 3607 |
| J. C. McKinley 1-C | 9700 | 3552 |

***For Tabulation and Comparison See Market Section***

### NORTH TEXAS

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| ARCHER COUNTY— | | |
| A. B. Harmonson et al, Harmonson 1 | 40 | 851 |
| Hunter-Lincoln et al, Carr 1 | 25 | 1441 |
| Skeen & Houghton, Kunkel 1 | * | 1380 |
| COOKE COUNTY— | | |
| Big Indian O&G Co. et al, Davis 2 | * | 3775 |
| Hoffer Oil Corp., Eberhart 2 | * | 1241 |
| Hutton-Hess & Hutton, C. M. Martin 1 | 5 | 1042 |
| W. F. Russell et al, O. O. Sitzes 1 | * | 2775 |
| DENTON COUNTY— | | |
| Harvey et al, Daly 1 | * | 1606 |
| GRAYSON COUNTY— | | |
| F-H-E Oil Co., H. C. Potts 2 | * | 428 |
| JACK COUNTY— | | |
| Brazos River Gas Co., York 1 | ¶10-675 | 2922 |
| THROCKMORTON COUNTY— | | |
| Swenson O&G Co., Swenson 2 | * | 2590 |
| WICHITA COUNTY— | | |
| Culberson Co., Waggoner Bros. 67 | * | 401 |
| Waggoner Bros. 68 | 3 | 398 |
| Waggoner Bros. 69 | 2 | 378 |
| YOUNG COUNTY— | | |
| O. Bratcher et al, Finch 1-A | * | 736 |



*Neal H. Anderson, who was recently elected oil umpire for California, following the consolidation of two district offices. He is a well known petroleum engineer, independent oil producer and vice-president of the Oil Producers' Sales Agency. His appointment as state umpire becomes effective August 15.*

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| J. H. Kleiner et al, Graham 1 | 40 | 679 |
| Graham 2 | 25 | 685 |
| Nash-Windfohr & Bob Thompson, Graham 3 | 50 | 2691 |
| Geo. Mollenkoph et al, Larimore 2 | 25 | 694 |
| H. J. Whittaker et al, Harmon 1 | 5 | 574 |
| Winstead 1 | * | 625 |
| Willis et al, Belknap 6 | 45 | 687 |
| Willis & Terrell, Morris 1 | * | 704 |
| Wise & Porterfield, Cullers 5 | 25 | 572 |
| Young Bros. & Terrell, Larimore 1 | 30 | 675 |
| CENTRAL WEST TEXAS | | |
| EASTLAND COUNTY— | | |
| Lone Star Gas Co., Cozart 2 | ¶2½ | 2177 |
| Hoffer-Grove 1 | ¶1 | 3695 |
| PARKER COUNTY— | | |
| Lloyd Oil Corp., A. V. Sell 1 | * | 2925 |
| SHACKELFORD COUNTY— | | |
| Jarvis et al, Herrington 1 | * | 1670 |
| TEXAS PANHANDLE | | |
| CARSON COUNTY— | | |
| Texas Interstate P. L. Co., Burnett (Sec. 60) 1 | ¶19½ | 2677 |
| WEST TEXAS | | |
| FISHER COUNTY— | | |
| The Texas Co-McGinnis & O'Donnell, T. A. Jean 1 | 1720 | 3105 |
| HOWARD COUNTY— | | |
| Continental Oil Co. et al, Brindley 1 | 60 | 3590 |
| JONES COUNTY— | | |
| Ewmo Oil Corp. (Moutray), Jane Hoyt 3 | 25 | 1968 |
| F. E. Shaheen & Barney Duffy, S. W. King 2 | * | 2035 |
| WARD COUNTY— | | |
| Gulf Prod. Co., Hutchings 8 | 450 | 2630 |
| Moran & Burkhart, J. T. Sweatt 1 | 70 | 2225 |
| J. D. O'Quinn et al, Cummins-Boogher 1 | 120 | 2217 |
| UPTON COUNTY— | | |
| C. C. Duffey et al, McClintic 5 | 220 | 3049 |
| SOUTH TEXAS | | |
| DUVAL COUNTY— | | |
| O'Byrne et al, Weil Bros. 1 | * | 2655 |
| GOLIAD COUNTY— | | |
| Nuehaus Drlg. Co.'s Pettus 1 | ¶10-50 | 4284 |
| REFUGIO COUNTY— | | |
| Gulf Coast Drlg. Co.'s Lambert 1 | * | 6536 |
| Houston Oil Co.'s Rooke 6 | 200 | 3705 |
| WILLIAMSON COUNTY— | | |
| Bilbrey-Zizinia's Taylor Country Club 1 | * | 1395 |
| ZAPATA COUNTY— | | |
| C. J. Webster O&G Co.'s Benavides 1 | * | 2020 |
| TEXAS GULF COAST | | |
| BARBERS HILL— | | |
| The Texas Co., Wilburn 6 | 3000 | 4509 |
| HUMBLE— | | |
| Rio Bravo Oil Co., HE&WT 2 | * | 2850 |
| MOSS BLUFF— | | |
| Texas Gulf Sulphur Co., McFaddin 5 | * | 1167 |
| McFaddin 6 | * | 897 |
| ORANGE FIELD— | | |
| Gulf Prod. Co., Kishi 1 | * | 5800 |
| LOUISIANA GULF COAST | | |
| TERREBONNE PARISH— | | |
| The Texas Co., State Lake Barre 6 | 2150 | 3800 |
| NORTHERN LOUISIANA | | |
| RICHLAND PARISH— | | |
| Southern Carbon Co., Rosengrant & Ducomb 4, 19-17-6e | ¶7½ | 2450 |
| MISSISSIPPI | | |
| HINDS COUNTY, (Jackson Dist.)— | | |
| Love Pet. Co., Maley 3, 15-5-1e | ¶35 | 2445 |

## CALIFORNIA

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| **LONG BEACH—** | | |
| Pan Cal Oil Co. 3 | 250 | 7220 |
| **PLAYA DEL REY—** | | |
| Union Oil Co., Del Rey 3 | 650 | 5815 |
| **RINCON—** | | |
| General Pet. Corp., Ferguson 3 | 200 | 2610 |

## EASTERN STATES

### PENNSYLVANIA

| | | |
|---|---|---|
| **TIOGA COUNTY—** | | |
| Lycoming Natural Gas Co., Harrington 1 | ¶20 | 4120 |

### NEW YORK

| | | |
|---|---|---|
| **WAYNE FIELD—** | | |
| Belmont Quadrangle Drilling Corp., Best 1 | ¶2 | .... |
| Cunningham Natural Gas Co., Gordon 1 | ¶3 | .... |
| Tri-State Gas Co., Norris 1 | ¶3 | .... |
| Olean-Wayne Producting Co., Lane 1 | ¶3 | .... |
| Decker & Co., Hoover 1 | ¶2½ | .... |

### WEST VIRGINIA

| | | |
|---|---|---|
| **BOONE COUNTY—** | | |
| The Pure Oil Co., Federal Coal 52 | ¶½ | 3141 |
| Pond Fork Oil & Gas Co., Coal & Cain 11 | ¶½ | 3041 |
| **CALHOUN COUNTY—** | | |
| Rocksdale Oil & Gas Co., Starcher 1 | ¶¼ | 2143 |
| F. F. McIntosh, Aldrich 1 | ¶¼ | .... |
| L. H. Bickel, Stump 12 | ¶½ | .... |
| **DODDRIDGE COUNTY—** | | |
| J. H. Pantz, Underwood 11 | ¶¾ | 3164 |
| **GILMER COUNTY—** | | |
| Pittsburg & West Virginia Gas Co., Snodgrass 1 | ¶¼ | 2120 |
| McCall & Co., Ralston 3 | ¼ | 1921 |
| Paul Weekley & Co., Petty 1 | ¶¼ | .... |
| **LINCOLN COUNTY—** | | |
| Empire State Gas Co., Butcher 2 | ¶¼ | 1355 |
| **PLEASANTS COUNTY—** | | |
| Albert Neely & Co., Brammer 3 | ¶¼ | .... |
| **KANAWHA COUNTY—** | | |
| Montgomery Gas Co., New River Colony 8 | * | 2902 |

### SOUTHEASTERN OHIO

| | | |
|---|---|---|
| **MORGAN COUNTY—** | | |
| Bowman Oil & Gas Co., Lovell 16 | ¶¼ | 1503 |
| Commonwealth Gas Corp., Parker Sands 5 | ¶¼ | 1403 |
| **WASHINGTON COUNTY—** | | |
| J. C. Ogle, Ogle 1 | * | 549 |
| Schramm Bros. Gas Co., Christopher 8 | ¶¼ | 1399 |
| Little Four Oil Co., Greenwood & Stewart 2 | ¶¼ | 1348 |

### NORTHWESTERN OHIO

| | | |
|---|---|---|
| **HANCOCK COUNTY—** | | |
| R. W. Kirk & Co., James 3 | 1 | .... |
| **HENRY COUNTY—** | | |
| Lake Shore & Southwestern Metal Co., Schafer 1 | ¶¼ | .... |

### CENTRAL OHIO

| | | |
|---|---|---|
| **ASHLAND COUNTY—** | | |
| Ohio Fuel Gas Co., Buchannan 1 | ¶¼ | 2867 |
| Millheim 2 | * | .... |
| **LICKING COUNTY—** | | |
| Wehrle Gas Co., Stall 1 | ¶¼ | 2435 |
| **MEDINA COUNTY—** | | |
| Ohio Fuel Gas Co., Homan 1 | ¶¼ | .... |
| Hines 2 | * | .... |
| Ramage & Willis, Pfeffer-McFadden 1 | * | 2807 |
| Edson & Co., Frank 23 | 20 | 423 |
| **MUSKINGUM COUNTY—** | | |
| The Atha Co., Pollock 1 | * | 3983 |
| **MEIGS COUNTY—** | | |
| Joe Rubin & Co., Tuckerman 1 | ¶½ | 824 |
| Ohio Fuel Gas Co., Wingatt 1 | ¶¼ | 1662 |
| **STARK COUNTY—** | | |
| East Ohio Gas Co., Harris 3 | ¶¾ | 4381 |
| **SUMMITT COUNTY—** | | |
| White & Bacon, Rech 2 | ¶3½ | 4035 |
| **RICHLAND COUNTY—** | | |
| Ohio Fuel Gas Co., McFadden 1 | ¶¼ | .... |
| **TUSCARAWAS COUNTY—** | | |
| Hopewell Gas Co., Quigley 1 | * | 3380 |
| **WAYNE COUNTY—** | | |
| Barnhart & Co., Elser 1 | * | 3196 |

### KENTUCKY

| | | |
|---|---|---|
| **DAVIESS COUNTY—** | | |
| Mida McMahan, Jones 1 | 1½ & 100 | 627 |
| Ellis & Ashly, Howard 2 | 50 | 628 |
| John Lewis & Co., Hite 1 | * | 825 |
| Johnson Oil & Refining Co., Hazelrig 1 | * | 1205 |
| Hupp & Duff, Howard 1 | * | 840 |

### MICHIGAN

| | | |
|---|---|---|
| **MIDLAND COUNTY—** | | |
| Walter L. McClanahan & Co., Struble 1 | 1500 | 3450 |
| **LENAWEE COUNTY—** | | |
| Security-Home Bank, Toledo, Fee 1 | ¶¼ | 125 |
| **WAYNE COUNTY—** | | |
| R. J. Coykendall, Fee 1 | ¶¼ | 125 |
| **WASHTENAW COUNTY—** | | |
| W. W. Hardy, Hardy 1 | * | 72 |

## KANSAS

| | | |
|---|---|---|
| **GREENWOOD COUNTY—** | | |
| York State Oil Co., Rice 1, sw c nw 22-23-11e | * | 1924 |
| **McPHERSON COUNTY—** | | |
| McPherson O&G & Shell, Hill 2, c sw ne 10-19-2w | ¶2½ | 2922 |
| Wolf Creek Oil Co. & Sinclair O&G, Dunsford 1, se c sw 23-19-2w | 360 | 2914 |
| Lario O&G & Shell, Wiggers 2, nw c ne 36-19-2w | 1990 | 3383 |
| Magnolia Pet. Co., Klassen 1, nw ne nw 21-19-1w | ¶24½ | 2912 |
| Abilene Oil Co., & Shell, Garrett 2, ne c 30-19-1w | 1500 | 3424 |
| Anderson 1, ne c nw 30-19-1w | 665 | 3412 |
| Anderson 2, ne nw nw 30-19-1w | 1935 | 3409 |
| Mid-Kansas O&G, Whitwright 1, sw c 30-19-1w | 1250 | 3399 |
| Stanolind O&G & Amerada, Flook 4, nw c 1-20-2w | 4190 | 2924 |
| Lario O&G & Shell, Miller "B" 1, ne se nw 6-20-1w | 2150 | 3418 |
| Noble, Stanolind O&G & Amerada, Zerger 2, ne c se 16-21-3w | 885 | 3057 |
| **SEDGWICK COUNTY—** | | |
| Derby Oil Co., Eastborough 6, (owd) se c nw ne 19-27-2e | 690 | 3285 |

## OKLAHOMA

| | | |
|---|---|---|
| **HASKELL COUNTY—** | | |
| Sooner O&G, Perral 1, c ne se 9-7n-20e | * | 1640 |
| **MUSKOGEE COUNTY—** | | |
| P. Boyle et al, Barnett 2, sw c ne nw 35-16-15e | ¶4½ | 1133 |
| G. D. Robinson, Brown 2, c n½ se ne 18-13-16e | ¶35 | 1443 |
| **OKMULGEE COUNTY—** | | |
| D. M. Logan, Pigeon 2, sw c se ne ne 31-15-13e | ¶5 | 1995 |
| **OKLAHOMA COUNTY—** | | |
| I.T.I.O., Lawrence Place 4, sw c ne 15-11-3w †4½ hr. | 5600 | 5210 |
| Pasadena Heights 6, sw c 14-11-3w †4 hr | 450 | 6380 |
| Ferndale 4, ne nw ne 11-11-3w | 465 | 6505 |
| Slick Estate, Classen-Edwards 3, ne se sw 3-11-3w †2 hr. | 3525 | 6325 |
| Classen-Edwards 4, cel sw 3-11-3w †2 hr. | 3010 | 6320 |
| Morgan Pet. Co., Stout-Gibbons 1, se c sw se 34-12-3w †3 hr. | 4225 | 6240 |
| Westgate Oil Co., Carey 2, ne c se nw se 34-12-3w †4 hr. | 6225 | 6338 |
| Scott et al, Ashley 1, sw c ne nw 14-11-3w †11 hr. | 955 | 6247 |
| **PONTOTOC COUNTY—** | | |
| G. J. Lynch et al, Newby 1, ne c se ne ne 24-5n-4e | 30 | 2374 |

†Total initial for first 24 hours estimated on a basis of gauge taken for length of time indicated in hours opposite the total initial figure given.

# SYSTEMATIZING THE OIL BUSINESS

*By* **G. H. BESSIRE**

**This System, prepared by Mr. Bessire after a number of years of experience in the oil industry and specialized study of systems pertaining to the business, fully meets the requirements of oil companies, independent operators, drilling contractors and bookkeepers. It takes up all phases of the leasing and producing branches of the oil business from an accounting standpoint.**

**It is invaluable to new organization as it takes up all of the problems of a corporation and a stock company from the time the charter, articles of association or trust agreement is received, until the business is liquidated, including process of liquidation. This System also contains field and office forms and the names of the different books necessary to carry on the business intelligently.**

**It contains detailed information on the following and other subjects: Stock Companies Incorporated and others. The Oil Business in general. The opening of your books, including the names of the accounts most generally used with a complete analysis of each account and examples of proper entries. Leases, Lease Rental Payments, with letters and forms for properly taking care of this matter, Lease Development (Drilling Wells) with complete instructions for taking care of this matter from the time the location is made until it is brought in either as a producer or a duster. With detailed instructions for the proper charging of the different expense and investment items so as to receive the most benefit from an INCOME TAX standpoint. Also the proper method of handling production from the time the well comes in until it is marketed. The Purchase Requisition, Warehouse, Taxes, Repairs and Replacements, Checks, Filing and valuable office tips, including employees schedule, Furniture and Fixtures, Stationery and Printing, Purchasing Department and Drilling Equipment and Oil Well Supplies.**

**It teaches the accounting department how to gather, compile and properly present to the executive officer that information in regard to the different departments of the business which will enable him to carry on the business more intelligently, and this information will be given to him so as to be available at all times, even after office hours and it will come to him in a form which will make it easy for him to carry with him on his field and business trips. In fact, it will place his business at his FINGER TIPS.**

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# Permits Granted for New Wells

▼ ▼ ▼

## KANSAS

COWLEY COUNTY—Allen and others, Sackett 1, c nw se 12-32-5e.

GREENWOOD COUNTY—Stanolind O&G et al, Ellis 6, sw c nw 27-23-11e.

RICE COUNTY—Yarnell & Shell, Guldner 1, c nw se 22-18-9w.

SEDGWICK COUNTY — Continental Oil Co., Black 1, (owd) sw se nw 16-25-1e.

## OKLAHOMA

MUSKOGEE COUNTY—C. C. Wachab et al's Benge 1, sw c nw sw nw 9-15-18e; C. W. Brown's Smith 3, sw c nw nw sw 14-15-15e; Mack Drlg. Co., Daniels 1, nw c ne ne se 33-16-15e.

PITTSBURG COUNTY—Tape Oil Co., Fulton 1, se c 34-7n-14e.

STEPHENS COUNTY—J. C. Chambers et al's Dare 1, se nw se 2-2s-8w.

WAGONER COUNTY—C. D. Bradley et al's Shepard 1, se ne nw 7-15-17e. C. D. Bradley et al's Kernal 1, ne ce nw sw ne 7-15-17e.

## TEXAS

ARCHER COUNTY — Bridwell Oil Co., Wichita Falls Oil Inv. B, 498, 19, S 81, B 125, Club Ranch, sur, 772 ft from s and 800 ft from w line. Frank Hutcheson, Archer City, H. K. Dycus, 93, 1, B 143, R. Storey sur, 750 ft from w and 150 ft from s line.

BEXAR COUNTY — Witherspoon Oil Co., San Antonio, J. Ramzinski, 80, 1, J. W. Riall sur, sw corner.

BRAZORIA COUNTY — Cullen & West Prod. Co., Houston, I. Y. Nash, 2040, 1, T. Alsberry sur, 2600 ft from w and 1240 ft from n line.

CALLAHAN COUNTY—H. V. Smith, Cisco, F. E. Clark, 40, 1, S 305, S. P. Ry sur, 150 ft from n and e lines sw¼ of nw¼; 2, 150 ft from s and w lines ne¼ of ne¼; 3, 150 ft from s and e lines ne¼; 4, 150 ft from s and e lines nw¼; 5, 150 ft from s and w lines nw¼; 6, 150 ft from n and w lines se¼ of se¼. A. L. Biggerstaff, 40, 2, S 310 S. P. Ry sur, 150 ft from s and w lines ne¼; 1, 150 ft from n and w lines se¼ of se¼.

COMANCHE COUNTY — H. P. Evans, Brownwood, S. N. Wilkerson, 81, 1, S 20, B 1, H&TC sur, 330 ft from s and w lines.

CRANE COUNTY — Southwest Oil Prod. Co., Dallas, J. B. Tubb, 80, 1, S 3, B B27, 330 ft from s and w lines nw¼.

DUVAL COUNTY — L. E. Lockhart, San Antonio, G. W. Sutherland, 160, 1, S 511, GB&ON sur, 1320 ft from n and 330 ft from w line.

GREGG COUNTY — Humble Oil & Refg. Co., Houston, A. L. Hughes, 91, 2, Geo. Hampton sur, 1353 ft from w and 205 ft from n line. J. F. Boles, 100, 1, D. Ferguson sur, 400 ft from n and 300 ft from w line. Fain-McGaha Oil Corporation, Wichita Falls, E. G. Richey, 12, 1, C. Rhode sur, 300 ft from n and 400 ft from e line. B. Byrd-Frost, Inc., Dallas, M. Andrews, 25, 1, B. W. F. Hyde sur, 150 ft from s and w lines. W. Smith, 39, 1, J. S. Caruthers sur, 150 fft from s and 199 ft from e line. Louis Sikes, Tyler, L. A. Rodden, 10, 1, J. R. Crosby sur, 246 ft from w and 150 ft from s line. Atlantic Oil Prod. Co., Dallas, W. H. Moyers, 128, 1, T. McGee sur, 300 ft from w and 400 ft from s line. W. P. Mason, Tyler, J. I. Choice, 167, 1, W. H. Johnson sur, 400 ft from n and e lines. C. Smith, 63, 1, J. M. Morris, 400 ft from s and e lines. B. F. Carroll, Corsicana, J. M. Dickson, 2, 1, from w line. W. D. Glasscock, San Antonio, Fee, 7, 1, Jno. Ruddle sur, 75 ft from n and 1010 ft from e line. H. H. Howell, El Dorado, Ark., Episcopal Church, 2, 1, W. P. Chisum sur, 207 ft from s and 104 ft from e line. Flanery Oil Co., Oklahoma City, Okla., J. H. Victory, 1, H. R. Hokit sur, 150 ft from nw and 150 ft from e line. Clyde Pulse, Enid, Okla., Simpson, 160, 1, S 140, B 3, I&GN sur, 330 ft from s and (Gray county). J. C. Reese, Gladewater, Producer's Oil, 1½, 1, B 2, M. Dillard sur, center. Sun Oil Co., Dallas, J. M. Haynes, 202, 4, G. A. Thompson sur, 250 ft s of center of n line. Heyser & Heard, Corpus Christi, Hineman, 45, 2, G. W. Hooper sur, 330 ft from s and e lines. Superior Oil Co., Dallas, H. Prichard, 40, 3, F. W. Johnson sur, 1529 ft from n and 330 ft from w line. Foster & Rhodes, Tyler, N. Williams, 95, 1, J. Mathews sur, 306 ft from w and 300 ft from s line. Petroleum Finance Corp., Longview, W. D. Lacy, 86, 2, E. H. Grisham sur, 670 ft from s and 1229 ft from e line. Columbia Oil & Gas Co., Dallas, C. J. Dalahite, 41, 1, D. Sanchez sur, 430 ft from n and 450 ft from e line. Continental Oil Co., Fort Worth, B. C. Todd, 40, 1, Wm. Castleberry sur, 330 ft from n and 314 ft from e line. Oils Inc., Oklahoma City, Okla., Moseley, 7, 1, Jno. Ruddle sur, 150 ft from s and w lines. Stanolind Oil & Gas Co., Longview, B. F. Phillips, 85, 1, Wm. Goodwin sur, 150 ft from s and e lines. Allen & Craft, Houston, Wm. Roberson, 5½, 1, M. Van Winkle sur, 256 ft from n and 157 ft from e line. Empire Gas & Fuel Co., Tulsa, Okla., L. J. Rogers, 68, 2, G. A. Thomason sur, 164 ft from w and 330 ft from n line. J. Bander, 1, W. H. Castleberry sur, 275 ft from s and 285 ft from w line. E. Muckleroy, 30, 2, J. S. Caruthers sur, 330 ft from s and w lines. East Texas Refg. Co., Dallas, A. Christian, 74, 1, G. W. Hooper sur, 364 ft from e and 350 ft from s line. Vacuum Oil Co., Houston, J. H. Beavers, 1, G. R. Rains sur, 330 ft from n and 250 ft from w line. F. H. E. Oil Co., Fort Worth, W. E. Jones, 30, 1, G. W. Hooper sur, 244 ft from n and 381 ft from w line. Gulf Prod Co., Houston, A. Neeley, 50, 1, C. H. Alexander sur, 250 ft from n and w lines; 2, 200 ft from n and e lines. S. C. Fishburn, 200, 2, F. W. Johnson sur, 196 ft from e and 156 ft from n line. Magnolia Pet. Co., Dallas, L. A. Griffin, 44, 2, M. Van Winkle sur, se corner. J. King, 33, 3, W. P. Chisum sur, 104 ft e of center of w line. O. F. Smith, 92, 2, H. H. Edwards sur, 300 ft from e and 220 ft from s line. E. H. Brawley, 80, 1, P. McAnelly sur, 450 ft from e and 150 ft from s line. Texas Co., Shreveport, La., H. T. Elder, 86, 3, M. Scott sur, 320 ft from n and 400 ft from w line. G. W. Clark, 60, 3, G. A. Thomason sur, 330 ft from n and 160 ft from e line.

GRAY COUNTY—Clyde Pulse, Enid, Okla., Simpson, 160, 1, S 140, B 3, I&GN sur, 330 ft from s and e lines of section. Humble Oil & Refg. Co., Wichita Falls, R. E. Hughey, 320, 1, S 154, B 3, I&GN sur, 1320 ft from n and w lines.

HUTCHINSON COUNTY — Stansylvania Oil & Gas Co., Amarillo, Stansberry, 160, 2, S 129, B Z, EL&R sur, 355 ft from w and 1060 ft from s line.

KARNES COUNTY—V. F. Neuhaus, San Antonio, I. L. Russell, 300, 1, C. Martinez sur, 2060 ft from sw and 3820 ft from se line.

LAMAR COUNTY—Optometrist Oil Club, Paris, J. M. McFadden, 25, 1, Jos. Deck sur, 450 ft from s and w lines.

RUSK COUNTY—Lion Oil & Refg. Co., El Dorado, Ark., H. Brooks, B, 87, 2, M. J. Pru sur, 150 ft from s and w lines. Big Indian Synd., Dallas, Deason, 10, 1, Pru-Ximinez sur, 236 ft from n and 150 ft from w line. Deason, 10, 2, Pru-Ximinez sur, 201 ft from s and e lines. Humble Oil & Refg. Co., Houston, M. Kangera, 116, 14, M. J. Pru sur, 330 ft from n and 1600 ft from w line. L. D. Crim, 564, 39, E. G. Sevier sur, 5117 ft from e and 2272 ft from s line; 40, 865 ft from nw and 829 ft from sw line; 38, 4000 ft from e and 330 ft from n line. L. D. Crim, 248, 42, W. P. Chisum sur, 2164 ft from ne and 2141 ft from se line. E. S. Holt, 30, 1, F. Cordova sur, 330 ft from w and 320 ft from s line. J. H. Wooley, 200, 5, F. Cordova sur, 1155 ft from s and e lines. A. L. Walker, 124, 3, F. Cordova sur, 318 ft from n and 330 ft from w line. A. D. Blackwell, 80, 6, M. J. Pru sur, 1600 ft from w and 264 ft from s line. I. Holt, B, 22, 2, W. P. Hollingsworth sur, 1161 ft from n and 227 ft from w line. A. D. Blackwell, 64, 5, F. Cordova sur, 330 ft from n and e lines. A. L. Walker, 124, 4, F. Cordova sur, 330 ft from w and 1128 ft from s line; 2, 350 ft from e and 330 ft from s line. A. D. Blackwell, 82, 7, F. Cordova sur, 508 ft from n and 330 ft from e line. J. W. Turner, 104, 3, A. Melton sur, 312 ft from w and 330 ft from s line. J. H. Arnold, 20, 1, S. P. Hollingsworth sur, 228 ft from e and 200 ft from s line. J. H. Wooley, 200, 7, F. Cordova sur, 350 ft from w and 980 ft from s line. Sol Dennis, 68, 2, A. Melton sur, 352 ft from w and 330 ft from s line. M. E. Minor, 120, 1, Wm. Killen sur, 330 ft from s and 150 ft from w line. J. E. Glover, 130, 4, A. Melton sur, 1050 ft from w and 950 ft from s line. B. Laird, 162, A4, I. Ruddle sur, 714 ft from w and 330 ft from s line. Heep Oil Corp., Houston, Wm. Hernigan, 10, 1, R. W. Smith sur, 430 ft from w and 170 ft from s line. Swift, Vaughn & Turner, Dallas, Sanders, 55, 1, T. J. Martin sur, 150 ft e of center of w line. Cameron Oil Co., Tyler, S. P. War ren, 5, 1, J. Womack sur, 150 ft from n and 380 ft from w line. J. E. Marr, Tyler, H. O. Lown, 3, 1, W. G. Tutt sur, 150 ft from n and e lines. Mid-Kansas Oil & Gas Co., Shreveport, La., R. G. Mason, 104, 1, J. B. Cadena sur, 150 ft from n and w lines. Droppleman Drilling Co., Wewoka, Okla., Warren, 12, 1, W. G. Tutt sur, 150 ft from s and e lines. Jas. A. Swindler, Muskogee, Okla., Mayfield, 123, 1, W. R. Cook sur, 170 ft from n and 150 ft from e line. E. S. Earle et al, Fort Worth, J. L. Pinkston, 5, 1, M. J. Pru sur, 235 ft from s and w lines.

SMITH COUNTY—Gulf Prod. Co., Houston, I. J. Smith, 217, 1, J. Vargas sur, 200 ft from s and w lines. Pace Pet. Co., Oklahoma City, Okla., T. O. Wright, 10, 1, J. Vargas sur, center. Humble Oil & Refg. Co., Houston, M. Thompson, 126, 1, I. Moore sur, 450 ft from n and e lines. Big Indian Synd., Dallas, W. W. Holland, 200, 1, T. Allen sur, 660 ft from n and 1330 ft from e line. W. R. Wolford, 40, 1, Jas. Jordan sur, 151 ft from e and w lines. Texas Co., Shreveport, La., J. W. Wilson, 134, 3, D. Collins sur, 865 ft from n and 255 ft from w line.

SHACKLEFORD COUNTY — Loggie & Arendt Oil Co., Albany, C. Compton, 160, 1, S 826, TE&L sur, 880 ft from ne and 150 ft from se line; 2, 1170 ft from nw and 1480 ft from ne line.

STEPHENS COUNTY—Red Eagle Oil Co., Breckenridge, R. Q. Lee, 80, 4, S 11, B 4, T&P sur, 350 ft sw of No. 1.

UPSHUR COUNTY — W. H. Peckham, Wichita Falls, J. B. Webb, 25, 1, G. W. Hooper sur, 445 ft from e and 450 ft from s line. Humble Oil & Refg. Co., Houston, E. Edwards, 70, 1, D. Ferguson sur, 255 ft from nw and 400 ft from ne line. A. J. Watkins, 76, 1, E. A. J. Evans sur, 330 ft from e and 870 ft from s line. J. K. Edwards, 281, 5, D. Ferguson sur, se corner. Stanolind Oil & Gas Co., Longview, A. W. Miller, 100, 1, S. L. Davis sur, 330 ft from n and e lines. Mudge Oil Co., Tyler, J. W. Free, 113, 2, D. Ferguson sur, 192 ft from n and 332 ft from e line.

YOUNG COUNTY—Pitzer & West, Breckenridge, L. M. Haggard, 90, 1, 457 TE&L sur, 350 ft from n and w lines. Wheeler & Brasheer, Wichita Falls, Jeffery, 15, 4, 42, TE&L sur, 216 ft from s and 150 ft from e line; 6, 234 ft from w and 216 ft from s line.

## CALIFORNIA

LOS ANGELES COUNTY—William L. Jones, Graham 1, 31-2-12.

McKITTRICK—T. H. Purman 1, 22-29-21.

MT. POSO—Vedder Pet. Corp., McVan 2, 14-27-27.

NEWPORT—Nuoil Co. 3, 29-6-10.

PLAYA DEL REY — International Pet. Corp. 4, 28-2-15.

ROUND MOUNTAIN—A. S. Mayes 1, 3-28-28.

VENTURA AVENUE—Associated Oil Co., Lloyd 108, 26-3-23.

(Continued on page 72)

# Wildcat Reports From All Sections

▼ ▼ ▼

## OKLAHOMA

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros' Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n, R 2e, Sec. 9, Mummer et al's Sornick 1, nw c se, hfw 2070-2170 ft sd 3693 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden et al's Collmer 2, ne c se ne sw, sd 5640 tools lost.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al's Acre 1, c sw ne, show gas 5298-5303 sd 5502 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer's Whitel, se c nw, sd 5850 ft.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co.'s Phillips 1, c nw sw, td 5120 ft to abandon.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey et al's Quier 1, se c sw, sd 3970 ft.

KAY COUNTY—T 28n, R 3e, Sec. 24, Summitt Drlg. Co.'s Hays 1, nw ne nw, td 3675 ft pb 3222 ft.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochran et al's McFadden 1, ne c sw, rig. T 22n, R 5e, Sec. 2, Sherry et al's Milsap 1, se c sw, hfw 3505-50 ft sd 3552 ft. T 20n, R 5e, Sec. 6, W. A. Rookstool et al's Berry 1, nw ne sw, sd 1951 ft show gas.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 3, Shepperd et al's Shepperd 1, se nw sw, sd 3690 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Patt son et al's McDuff 1, sw nw se, show gas 5654-64 sd 5733 ft.

LATIMER COUNTY—T 6n, R 19e, Sec 16, P. English et al's Weaver 1, c nw se, sd 1542.

OKLAHOMA COUNTY—T 12n, R 4w, Sec. 17, C. F. Cuniff Trustee's St. Joseph 1, sw c ne sw se, sd 6700 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, Bunte et al's Bruner 1, se c nw, rig.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Ute Oil Co. et al's Williams 1, c sw, sd 5150 ft. T 11n, R 26w, Sec. 4, J. J. Rook and Palmer's Davis 1, c nw ne (owd) dr 3010 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey et al's Robinson 1, c ne nw, sd 150 ft.

WASHITA COUNTY—T 8n, R 19w, Sec. 29, Snodgrass et al's Blocker 1, nw c dr 1927 ft. T 8n, R 18w, Sec. 21, Burns & Prince's Dock 1, sw c, sd 1050 ft.

GREER COUNTY—T 7n, R 22w, Sec. 1, Good & Dowell's Cliffel 1, nw c, sand 1462 ft 1501 ft sd 1745 ft. T 7n, R 21w, Sec. 23, H. A. Franch's Murphy 1, sw nw se, sd 1654 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee's Phillips 1, ne c sw, sd 4800 ft.

COAL COUNTY—T 2n, R 8e, Sec. 10, Whitney et al's Miller 1, se c ne, (owd) sd 760 ft. T 1n, R 8e, Sec. 35, W. E. McCraw O&G Co.'s Stiring 1, ne c se, sd 1730 ft.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brockshire et al's Guinn 1, ne c, show gas 360-72 ft sd 500 ft.

BRYAN COUNTY—T 7s, R 10e, Sec. 8, Bryan Oil Co.'s El Childs, ne se sw, sd 660 ft.

## KANSAS

MORTON COUNTY—Hydraulic Oil Co., State land 1, nw se, 22-34-43w, sd 3460 ft.

SUMNER COUNTY — Trees Oil Co. & Shell, Springate 1, ne se sw, 6-34-2e, dr 1025 ft.

COWLEY COUNTY—Fisher et al, Hunt 1, c sw se se 11-34-3e, ru and sd.

SUMNER COUNTY—Spencer et al, Porter 1, ne sw 12-33-4w, dr 2775 ft. Otstot et al, Warlow 2, c se nw se, 22-33-3w, T. chat 4070 ft; SO 4080 ft wtr 4116 ft, dr 4150 ft.

FORD COUNTY—Carter et al, Community-Everett 18, c ne, 22-29-21w (6000 ft test), td 5549 ft, co.

SEDGWICK COUNTY — Magnolia, McLaughlin 1, nw c, 31-28-1w, dr 2235 ft.

### ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports; *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—m llion feet of gas; abn — abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—dr lling; fsh — fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd — shut down; sdtr — sidetracking; sp — spudding; sr — straight reaming; td — standardizing; sw—salt water; td—total depth; ur—underreaming; wo — workover; wosr—waiting on standard rig.

FORD COUNTY—Swain et al, Henthern 1, c nw, 21-25-24w, 5-inch 4645 ft, sd 5105 ft.

STAFFORD COUNTY—Rosenthal, Stanolind & Amerada, Gray 1, c ne, 11-34-13w, sd 2900 ft.

HARVEY COUNTY—Liggett et al, Davis 1, c sw se ne, 7-24-1e, ru. J. P. Flanagan, Sheridan 1, c sw, 32-22-1e, td 2130 ft, rng 10-inch.

MARION COUNTY—Maidwell, La Master 1, nw c, 31-22.4e, td 650 ft, sd.

COFFEY COUNTY—Hegberg et al, Kroft 1, se sw se, 30-22-14e, 10-inch 818 ft, sd 1565 ft.

BARTON COUNTY—McCool et al, Isern 1, c sw se ne, 12-20-11w, td 1600 ft, sd.

RUSH COUNTY—Dewey & Mitchell, Greenwalt 1, c sw, 17-19-16w, td 3840 ft, sd with so.

BARTON COUNTY—Skelton Oil Ott 1, c se se, 16-19-14w, td 2560 ft, ur 8-inch.

RICE COUNTY—Deitrick & Langston, Purcell 1, nw c, 33-19-9w, dr 3375 ft.

BARTON COUNTY—Syndicate Oil, Boertz 1, c nw se ne, 13-18-12w, td 2450 ft, sd.

RICE COUNTY — Allison & Fitzwilliams, Blake 1, ne nw, 9-18-10w, 8-inch 2963 ft, dr 2980 ft.

CHASE COUNTY—Borden et al, Atkinson 1, nw se, 18-18.7e, machine.

MORRIS COUNTY—Alexander et al, Wycoff 1, c sw se 5-17-7e, spd and sd. Urschell et al, Bersuch 1, c nw se nw, 10-17-7e, ru and sd.

ELLSWORTH COUNTY — Keys et al, Gregory 1, sw c 23-16-9w, dr 1850 ft.

MORRIS COUNTY — Hankenson et al, Cessnum 1, sw se 24-17-9e, 2475-78 ft, hfw ur 6-inch.

ELLSWORTH COUNTY — Milton et al, Kaster 1, se ne 6-14-9w, 6-inch 3300 ft, td 3350 ft, sd.

OSAGE COUNTY—Riggs-Smith, Wood 1, c se nw 31-14-15e, 10-inch 1050 ft, sd.

RUSSELL COUNTY — Austin Drlg. Co., Rockefeller 1, se c 6-13-12w, 3320-25 ft, hfw, td 3374 ft, sd.

SALINE COUNTY—Twin Mounds Oil Co., Weis 1, c w½ ne nw, 30-13-4w, (owd), td 2710 ft, dr by 8-inch.

DICKINSON COUNTY—Severs et al, Livingood 1, ne sw 13-13-2e, dr 4026 ft, so.

RUSSELL COUNTY—Gilbreath et al, Bratton 1, c ne, 33-11-13w, pb 3189 ft, sd.

LINCOLN COUNTY—Buck et al, Schultz 1, c se ne sw 19-11-6w, rog.

GRAHAM COUNTY — Schleimeyer et al, Clark 1, sw ne ne 11-9-25w, 4639-4646 ft hfw, td 4648 ft, sd.

CLAY COUNTY—Nebraska Oil, Tivier 1, sw c 19-8-9e, sd 2700 ft.

SHERIDAN COUNTY — Flo et al, Shoemaker 1, se sw sw 27-27-26w, 10-inch 1178 ft, sd 2445 ft.

WASHINGTON COUNTY—Sincox, Penwell 1, nw se nw, 16-3-3e, sd 1720 ft.

RAWLINS COUNTY—Danciger et al, Unknown 1, sw c 3-2-35w, 6-inch 2995 ft, sd 3501 ft.

## SOUTHERN CALIFORNIA

ALHAMBRA — Yellowstone Oil Corp.'s Huntington Land 1, 24-1-13, re-dr 1200 ft, td 3920 ft; Construccio 1, 19-1-12, will make production test at 1570 ft, plugged back from 2015 ft.

CALABASAS—L. W. Rucker's 1, 26-1-17, dr shale 415 ft.

FULLERTON — Standard's Bastanchury 1, 21-3-10, swabbing above plug at 7210 ft, td 8144 ft.

LAWNDALE—J. Oscar Smith's Peck-Hokum 1, new lcn.

LYNWOOD—William L. Jones' Graham 1, 31-2-12, new lcn.

NEWHALL — W. T. Ball's 1, 34-3-16, lcn. Guarantee Oil Co.'s Hammond 1, dr shale 3257 ft.

NEWPORT—Nuoil Co.'s Gessell 2, 29-6-10, dr shale and hard sand 1800 ft. Standard's Irvine 1, 26-6-10, 8⅝-in cas cmt 4630 ft, td 5530 ft.

OLINDA—Graham-Loftus Oil Co.'s 1, 18-3-9, dr hard sand 9222 ft.

PLAYA DEL REY — Mesmer City Realty Co.'s 1, 24-2-15, dr shale 6535 ft.

PUENTE — El Dorado Oil Co.'s Baird 1, 30-2-9, sd 1655 ft, making repairs.

SAN FERNANDO — El Caballero Estates Co.'s 1, 23-1-16, dr shale 975 ft.

SUNSET BEACH—Gieck Oil Corp.'s 1, 20-5-11, fsh for dr collar, td 5955 ft.

WILMINGTON—York & Smullin's Watson 1, 29-4-13, plugged to 3790 ft, td 4644 ft.

## NORTHERN CALIFORNIA

| Company, Well and Location | | Initial Production Bbls. | Depth |
|---|---|---|---|
| KERN COUNTY— | | | |
| Alpine Oil Co.'s Di Giorgio 1, 13-31-29 | * | | 3775 |
| KINGS COUNTY— | | | |
| Valley Exploration Co.'s Brennan 1, 20-23-20 | * | | 3750 |

### KERN COUNTY

BELRIDGE—Belridge Oil Co.'s 27-64, 27-27-20, dr oil sand 5350 ft: 35-48, 35-27-20, 9⅝-in cas cmt 4985 ft, td 5005 ft; 35-49, 35-27-20, dr shale 3950 ft. Continental's Result 2, 36-27-20, flowing at 1000-bbl rate, td 5475 ft. General Pet.'s Berry 1, 30-28-21, sr 5380 ft. Standard's McPhail 2, 36-27-20, co 5520 ft, td 5671 ft. K. C. Wallace's 1, 32-29-21, dr 4225 ft.

BUTTONWILLOW—Graham-Loftus Oil Corp.'s 1, rig. Milham Exploration Co.'s Paige 1, 6-28-23, rigging up rotary, td 2738 ft. Wilshire Oil Co.'s Nordon-Salisbury 1, 7-29-24, sd 6990 ft.

CARRIZO PLAINS—Trav-El Oil Co.'s 1, 7-32-22, dr hard sand 2026 ft.

DEVIL'S DEN—Cumberland Oil Co.'s Cumberland 2, 21-26-18, fsh for drill pipe 820 ft. Standard's Alferitz 1, 14-25-18, pumping oil and water, td 3286 ft, plugged to 2700 ft.

McKITTRICK—California Oil Producers' 2, 30-30-22, dr shale 4250 ft.

TEMBLOR HILLS—Kent & McDonald's 1, 3-32-22, co 1825 ft.

WEED PATCH—Mohawk Oil Co.'s arl 1, 4-31-29, rigged to sp. Shell's Porter-Day 1, 29-30-29, flowing oil by heads, plugged to 5789 ft, td 8419 ft. Sy Wicker's 6, 12-30-28, dr shale 3522 ft.

### SANTA BARBARA COUNTY

COAL OIL POINT—Bolsa Chica Oil Corp's Augur Permit 191-1, 24-4-29, dr shale 4615 ft.

GOLETA—General Pet.'s More 3, dr shale 6135 ft. Ohio's Oakley 1, 16-4-28, rigging up rotary. Strickland & Tibbett's Duncan 1A, 19-4-27, dr red sand 4360 ft.

LOS ALAMOS—N. S. Wilson's 1, 2-7-33, dr shale 3465 ft.

ORELLA—General Pet.'s Erburo 10, swabbing 3112 ft, ran 2½-in tubing to 2800 ft, will continue test. Oakburn Oil Co.'s Permit 169-1, co 2835 ft.

SANTA MARIA—Western Gulf's Bradley 1, 5-9-33, dr shale 6860 ft.

### VENTURA COUNTY

BARDSDALE — Buenaventura Oil Co.'s 1, 12-3-20, dr oil sand 1320 ft.

RINCON — Chanslor-Canfield Midway Oil Co.'s Hobson A-2, 23-3-24, swabbing 8072 ft, td 10,030 ft. Continental's Grubb 1, 23-3-24, dr shale 6128 ft.

HOPPER CANYON — Bardeen Pet. Co.'s 1B, 13-4-19, dr shale 300 ft.

SOUTH MOUNTAIN—H. H. Bell's Lemon 1, 22-3-21, rigging up cable tools.

### MISCELLANEOUS

FRESNO COUNTY—Associated's Mitchell 1, 22-21-15, dr gray sand 6200 ft.

KINGS COUNTY—L. W. Seymour's 1, 10-23-16, co 1010 ft. T. H. Purman's Avenal 1, 36-23-17, dr shale 4255 ft. Eagle Oil & Gas Co.'s 1, 15-23-20, rig. Kettleman Lakeview Oil & Gas Co.'s 1A, 20-23-20, 9⅝-in cas 1089 ft, td 1095 ft.

MENDOCINO COUNTY—Twin State Oil Co.'s Soldani 1, 14-12-17, fsh recovered, will deepen from 7060 ft.

MONTEREY COUNTY — F. A. Brown's Taylor 1, 15-23-14, sd 797 ft. Pacific Inland Oil Co.'s 1A, 19-23-15, fsh for drill pipe 1350 ft.

SAN LUIS OBISPO COUNTY—A. T. Jergins' 1, 6-32-13, dr shale 1926 ft. Paso Robles Synd.'s Emerick 1, 34-27-11, rigging up rotary, td 4027 ft.

TULARE COUNTY—Ducor Pet. Co.'s Zimmerman 1, 14-24-27, m on iron 2180 ft. Fred H. Gholson's Chambay 1, 3-23-27, dr shale 1375 ft. Ellis & Stanford's 1, 20-24-23, dr shale 1200 ft.

## MOUNTAIN STATES

### MONTANA

CASCADE—Andover Oil Co.'s Floweree 1, se 29-21-2w, td 2175 ft, hfw.

GALLATIN—Gallatin Valley Oil Co., 1-1n-4e, dr.

GLACIER—Fulton Pete Corp.'s Blackfeet 1, ne 28-38-12w, dr out cem 2570 ft.

GOLDEN VALLEY — Golden Valley Oil Co., 28-6n-22, dr 2050 ft.

LIBERTY—Peoples O&G Co., First Nat'l Bank 1, nw 17-36-6e, sd for pipe 1285 ft. California Co. for Utopia Oil Co., se 11-33-6e, cem pipe at 2990 ft.

ROSEBUD—Prairie O&G Co., 1-XX, 26-10-39e, bld rotary rig.

SWEETGRASS—Shoshone Cons., nw 23-2n-15e, run 6-inch, td 5793 ft.

TETON—Andover Oil Co.'s Carlson 1, 5-24-4w, stand 150 ft. California Co.'s Sullivan 1, nw 34-27-7w, run 12½-inch to 848 ft, dr 855 ft. Earl Oil Corp., Gad 1, se 22-22-8w, sd 3730 ft. Trans-American Oil Co., State 1, sw 21-24-8w, mud pipe at 550 ft.

TOOLE—Liquid Gold Oil Robert 1, ne 25-36-12, stand 2500 ft. Oregon Oil Synd., se 20-36-2e, wait for equip, rigged and ready to spud.

YELLOWSTONE—Pan American Oil Synd., 23-2s-24e, dr 1300 ft.

### NEW MEXICO

CHAVES—Neal et al, Russell 1, nw 21-14-25e, stand 2320 ft.

DE BACA—Salado Dome Oil Corp., sw 6-4n-20e, ready to dr out cem, 3200 ft. Landowners Oil Co., State 1, ne 16-1s-27e, stand cem, td 4508 ft.

GUADALUPE—N. M. Prod. & Ref. Co., McMullen 1, 24-5n-16e, dr 1685 ft.

HARDING—Kumbaca O&G Co., Kerlin 1, se 34-21s-30e, 3M carbon dioxide gas at 973 ft.

LUNA—Angelus Oil Mining Ass'n, 20-21s-10w, dr 6140 ft.

McKINLEY — J. W. Halsell's 1, 17-18.9w, sd 3255 ft. Wms. et al's A. T. S. F. 1, se 19-18n-8, stand 1900 ft. United Kern Pete, Inc., sw 1-18n-11w, lcn. Dysart et al, Dysart 2, ne 14-14-10w, sd temp at 1315 ft. Johnswood Oil Co., Hannett 1, sw 12-15n-10w, dr 625 ft.

MORA—Fulton Pete Corp.'s Santa Fe Dioxice Co., Wagonmound 1, ne 14-19-21, stand 1316 ft.

OTERO—Ernest et al's 1, se 20-25s-7e, sd 1005 ft. Pasotero Oil Corp., Evans 1, sw 22-24s-12e, wtg cable tools, 1375 ft.

RIO ARRIBA—Berrenger et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pete Co.'s Gov't 1, se 14-30n-7w, sd 250 ft. Governador Oil Co.'s 1, se 12-29n-7w, dr 1350 ft.

ROOSEVELT—Peterson et al, Good 1, ne 32-5s-30e, ready to spud.

SAN JUAN—Kutz Canon O&G Co.'s Day 1, se 20-28n-10w, wtg for cable 3412 ft. Rio Grande Dev. Co.'s 2, 9-29-11, stand 1530 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, dr 4740 ft. San Juan Leaseholds, Bowman 3, ne 30-30-15, sd 2635 ft. Reserve Oil Co., Reserve 3, se 36-22-14, ur, td 810 ft. R. C. Oswell et al, nw 34-30n-11w, dr 565 ft. Williams et al, Stallings 1, sw 17-25n-15w, stand 150 ft. Ortega et al, Westwater 2, ne 24-31n-16w, co.

SANTA FE—Jones, Owsley et al, 5-10n-9e, dr 195 ft.

TORRANCE—Williams et al's Staplin 1, ne 16-8n-10e, ready to res 1643 ft.

VALENCIA—Harlan et al, Harlan 4, nw 5-6n-2e, stand 3800 ft.

### COLORADO

ADAMS—N. M. Slatt's 1, se 27-26-64w, string 6⅝-inch at 3725 ft.

ARAPAHOE—McDeb Drlg. Co.'s Fitzsimons 1, ne 7-4n-68w, dr 5838 ft.

BOULDER—C. T. Ahlstrand's Woodley 1, nw 8-3n-70, dr 100 ft.

EL PASO — Utemore Synd., Cannon 1, ne 10-16s-66w, sd 1125 ft.

GRAND—Oil Mineral Land, Inc., McElroy 1, sw 14-2n-81w, stand 545 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-59w, prep to res, td 3920 ft.

LA PLATA — McGarr Pete Co.'s Pinon Mesa 1, ne 34-33n-12, prep to spud. Klem Pete Corp.'s Olbert 1, se 9-26n-12w, stand 3125 ft. Murchison Oil Co., Doescher 1, nw 29-33n-12, change to cable tools, td 1505 ft.

LINCOLN—Eastern Colo. Oil Corp.'s State 1, 36-14n-57w, fsh 3410 ft.

MONTROSE — Uncompahgre O&G Co., Title & Trust 2, 27-50n-10w, td 1021 ft.

MORGAN—Ind. Terr. Illum. Oil Co., State 1, ne 16-1n-57w, dr 4700 ft, hole trouble. Independent O&R Co., Schmidt 1, nw 19-6n-60w, bldg rig. Juhan et al, Kent 1, sw 2-2n-57w, dr 1100 ft. Colo. Ass. Oil Co., Humphreys 1, se 14-4n-58w, ready for derrick.

PUEBLO—Anchor Oil Co.'s Easley 1, sw 35-22s-57w, td 705 ft.

PARK—So. Park Oil Co.'s Milligan 1, se 13-8s-76w, dr 2205 ft. So. Park O&G Co.'s Easche 1, ne 5-9s-76w, cleaning out at 2370 ft.

RIO BLANCO—California Co.'s Raven 1, se 20-2n-102w, dr 1540 ft. Magnolia Pete Co.'s Maddock 1, se 9-2s-96w, dr 810 ft.

ROUTT—Fish Crk. O&G Co., Omholt 1, ne 29-4n-87w, resum at 115 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4-56, stand 1510 ft.

WELD — Reiter-Foster and Platte Valley Pete Corp., Johnson 1, nw 24-6n-61w, dr 6765 ft. Aztec Corp., Kirchoff 1, se 1-6n-61w, cellar. Retter Oil Co., Smith 1, 14-1n-68w, lower cas td 1171 ft. Conoco, Gadbois 1, sw 24-6n-61w, spdg. Conoco, Briggs 1, sw 13-6n-61w, spud 25 ft. Vincent & Cunningham, Gadbois 1, nw 25-6n-61w, mvg in.

### WYOMING

CARBON—Midwest Refining Co., U. P. 27, 27-11-81, cem back to 3215 ft, bad cave. Prairie O&G, Bunker Hill 1, 29-27-87, rotary rigged up. P. & R., Overland Dome 1, 19-20-83, dr 1321 ft.

CONVERSE—Phillips Pete Corp., 27-32-69, start 11th core test. John Ackard, 24-33-72, gas show 1490 ft. Gust Anderson, se 7-35-75, lcn. Otto Olston, 6-32-74, spd.

FREMONT—P. & R. 1, 33-34-92, cem back from 6081 ft. Wiebolt et al, 35-33-99, sd 1850 ft. Ward O&G Co., 28-34-90, cem 2030 ft. Kinney-Coastal, sw ne 22-3n-1w, rig up. Yellowstone Oil Co., 14-38n-94w, resum at 600 ft.

HOT SPRINGS—Grebo Roy. Co., Inc., 3-47-100, sd 836 ft.

LARAMIE—Prairie O&G Co., Warren 1, 22-13-62, abn 639 ft.

LINCOLN—Wyo. Prod. Co., 14-24-113, dr 1700 ft.

NATRONA — Midwest's 11, nw 32-34n-77, stand 5340 ft. Cuyler Oil Co., 23-36n-85w, stand 2290 ft. Midwest's Midway 1, ne 23-35n-79w, co 5908 ft.

NIOBRARA—Globe Pete Corp., 2-39-61, spd 20-inch hole.

PARK—Resolute Oil Co., 17-57-101, stand for orders 8725 ft, good showings.

SHERIDAN—R. & D. Oil Co., se 21-57-87, stand cem 600 ft.

SUBLETTE—Cretaceous Oil Co., sw 7-28-113, show at 350 ft.

SWEETWATER—Mtn. Fuel Supply, Tucker 1, 18-13-99, cem 3613 ft, td 3660 ft.

UINTA—Transwestern Petroleum Ltd., 6-14-118, fsh tools 3100 ft. Clawson et al, nw 29-14n-118w, lcn.

WASHAKIE—Ohio Oil Co., lot 14, 19-45-92, coring stray sand 7105 ft.

WESTON—LeFaivre Oil Synd., se 29-45n-68w, dr 1300 ft. Gose Synd., 28-47-65, resum 4918 ft. Julius Peters et al, Witzell 1, se nw 30-46-64, co 1808 ft.

## NORTHERN LOUISIANA

BIENVILLE PARISH — Arcadia Drilling Co.'s Atkins 1, 28-18-6w, dr rock 1355 ft.

BOSSIER PARISH—Andrews & Davlin's Nattin 1, 15-22-14, 4¼ cas 2882 ft, flowing 2 to 5 bbls oil daily by heads, wo td 2890 ft. Rambaugh et al's Allison 1, 10-19-13, sd 1100 ft. Flint River O&G Co.'s DeMoss 1, 22-22-13, 6⅝ cas 3028 ft, bailed dry, sd wo in sandy shale 3089 ft. Dr. Hankins et al's Newell 1, 12-19-11, sd 1410 ft. D. L. Perkins et al's Ardis 1, 13-15-11, 10-inch 120 ft, sd 1000 ft.

CADDO PARISH—Pelican Nat. Gas Co.'s Cooper 1, 29-18-14, ta in red shale and lime 3648 ft. United Gas Pub. Serv. Co.'s Smith 1, 33-23-16, 7-inch 5395 ft, coring lime and shale 5532 ft. W. P. Wallace, Tr.'s, Cunningham-O'Connor 2, nw nw 15-17-14, 10-inch 84 ft, dr 1405 ft. Pyramid O&G Co.'s Breard 2, se nw 10-18-16, sp dr 180 ft.

CALDWELL PARISH—Monroe Pet. Corp.'s Burton 1, 36-12-2e, sd acct titles 2986 ft. Carter Bell et al's Taylor 1, 17-14.4e, dk.

DE SOTO PARISH — Rellitt O&G Co.'s Cannon Hrs. 1, 12-11-16, sd 1410 ft. W. H. Weichert's Smith 1, 31-14-15, sd 2350 ft. E. T. Oakes' Johnson 1, 3-13-15, sd in chalk 2011 ft. Walters & Nicholson's Jim Guy 1, 3-11-13, sd 700 ft. S. S. Meek, Tr.'s, Wagner 1, se se 5-12-14, 10-inch 101 ft, top hard chalk 1659 ft, dr 2065 ft.

NATCHITOCHES PARISH — C. M. Talley et al's Talley 1, 29-11-10, sd 1380 ft. W. M. Coates et al's Collins 1, sw nw ne 28-9-10, ta 4091 ft. J. W. Cooper et al's Cooper 1, 35-11-10, sd 3156 ft; Cooper 2-A, 35-11-10, sd 1515 ft.

RED RIVER PARISH—Mack Jourdan Co.'s Lockett 1, 33-13-10, sd 2500 ft.

RICHLAND PARISH—National Gas Co.'s Singletary 1, 20-18-7e, rig up to deepen, td 897 ft. Richland Operating Co.'s Baremore 1, 19-16-7e, lcn.

RAPIDES PARISH — Pelican Nat. Gas Corp.'s Long Bell 1, 3-1n-3w, dk.

SABINE PARISH—Langbridge Oil Corp.'s Stephens 1, se ne 17-9-11, sd repr rig 2215 ft. Houston-Sabine Prod. Co.'s Sabine 1, 36-8-12, sd 2440 ft. J. J. Kean's Belton 1, 31-9-13, 8-inch cas 1590 ft, sd 1610 ft. H. W. Perritt's Bowman-Hicks 4, 2-7-12, sd 2502 ft; Bowman-Hicks 5, 2-7-12, lcn. A. H. Thomas' Edwards Est. 1, 8-8-13, sd 1200 ft. R. L. Gay, Tr.'s, Long-Bell A-1, nw nw 10-8-13, tested 4 fourbles light oil and 5 fourbles sw in ds test 3585-3638 ft, sd wo. Ohio Oil Co.'s Bowman-Hicks 9, 35-8-12, lcn; Bowman-Hicks 10, 35-8-12, lcn; Bowman-Hicks 11, 2-7-12, lcn. Diffie & Barrett's Lites 1, 34-8-11, 10-inch 105 ft, sd. Hudson & Bird's Walden 1, sw ne 26-8-11, 10-inch 100 ft, dr 527 ft. Hawkins et al's Moran 1, se ne 1-7-11, 400 ft oil in hole, wosr, td 2620 ft. Lyons & Neely's Duggan 1, 14-7-11, lcn. Texas Co.'s Nabors 1, ne se 2-7-11, 10-inch 90 ft, cemtd 6⅝ cas 2368 ft, bailed dry 2410 ft, dr chalk 2424 ft. W. M. Coates' Bowman-Hicks 1, ne sw 2-7-12, sp dr 50 ft. Bengail Oil Co.'s Nulton 1, nw ne 1-7-13, dk. Magnolia Pet. Co.'s Peterson 1, ne ne 10-7-11, 12-inch cas 130 ft, 8⅛ cas 2370 ft, tested est 25 bbls daily 2432 ft, arr deepen. L. K. McGuffin's Byrd 1, 1-7-11, sd 400 ft. Zeke Lohman's McCormick 1, ne sw 2-7-11, sd for fuel 1500 ft. Ben Merritt's Byrd 2, 1-7-11, 10-inch 88 ft, sd. Roy Baker's Sabine 1, 11-7-12, sd 2440 ft. Loring Oil Co.'s Bowman-Hicks 17, 16-7-12, 15½ cas 110 ft, top marl 2530 ft, top chalk 2540 ft, sent oil through top 122-ft dk, ds test, cemtd 9⅝ cas 2525 ft, td 2566 ft (was started for

6000 ft test). Gautier et al's Meshell 1, 30-8-12, tested dry show oil, sd 2400 ft.

TENSAS PARISH—A. R. Willis' Curry 1, 39-11-12e, sd 3545 ft.

UNION PARISH — Don Brooks, Tr.'s, Douglas 1, ne sw 9-22-2w, rig. Ruston Drilling Co.'s Summitt Land Co .1, 1-21-1w, top Nacatosh 2033 ft, tested sw through ds 2158-74 ft, did not set cas, top red beds 2928 ft, tested 15 fourbles sw 2922-65 ft, arr abn in reds, td 3056 ft.

WEBSTER PARISH—D. M. Coyle's Frazier 1, 27-23-11, dk. Cassidy & Davis' Nickerson 1, 29-23-10, sd 160 ft.

WINN PARISH—Gulf Ref. Co.'s Bodcaw Lbr. Co. A-1, 4-10-5w, dr blue sandy shale 4040 ft.

## ARKANSAS

CHICOT COUNTY—W. R. Smith's Lytle 1, 31-18-3, ta 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s Underwood 1, 4-20-8e, sd 1252 ft.

CLEBURNE COUNTY—Donnell et al's Fee 1, 33-11-9, sd after testing sw td 3515 ft.

CLEVELAND COUNTY — Crumm & Stilwell's Bell 1, 10-10s-12w, rig.

COLUMBIA COUNTY—Kendall Oil Co.'s Fullenwider & Kitchen 1, ne ne 13-17-22, 8¼ cas 800 ft sd.

DALLAS COUNTY—Zepp O&G Co.'s W. E. Hillman 2, se ne 20-10-13, dk. Jno. James, Tr.'s Fordyce Lbr. Co. 1, 11-9s-15w, sd 2520 ft. E. C. Brewer, Tr.'s Hillman 1, 20-10-13, sd in white sand 2869 ft.

DREW COUNTY—Cooperative Dev. Co.'s Hardy 1, ne ne 6-13s-7w, rig.

HOT SPRINGS COUNTY— Starr Oil Co.'s Cunningham 1, 11-5-16, 12½ cas 62 ft dr hard rock 1116 ft, (sec hol.).

JOHNSON COUNTY—Blackwell O&G Co.'s Wyver 1, 21-8-23, ta 5600 ft.

LA FAYETTE COUNTY—Crawford Drilling Co.'s Vaughan 1, 25-19-25, lcn abn.

LAWRENCE COUNTY — Marguerite Dev. Co.'s Broadway 1, 31-17-1, sd 45 ft.

LINCOLN COUNTY — L. B. Cook, Tr.'s McGehee Pltg. Co. 1, 5-8s-7w, 10-in 1294 ft dr 2198 ft.

LITTLE RIVER COUNTY—Fay Roberts Oil Co.'s Russell 1, 25-12-29, lcn.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-8-26, sd 3610 ft.

MILLER COUNTY — W. E. Noel et al's Dickson 1, 11-20-27, sp dr 1600 ft.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, ta 2920 ft. E. R. Henderson's Lee 1, 31-8s-24w, 8¼ cas 350 ft cored hd red shale 462-65 ft sd 1020 ft.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Waldron O&G Co.'s J. G. White 1, 17-3n-29w, sd wo cas 1860 ft (sec hole).

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, tested sw sd 3515 ft. Ozark Nat. Gas Co.'s Giard 1, 34-8n-30w, dr 2132 ft.

SEVIER COUNTY — Tri-State O&G Co.'s Bank of DeQueen 1, 34-8s-32w, rigged up and sd.

UNION COUNTY — Southern Prod. Co.'s Wingfield 1, 16-19-15, sd 2608 ft. Lion O. R. Co. et al's Guy P. Hayes A-9, 4-16-15, cored red shale 4999-5003 ft ratholed to 5021 ft sd in shale 5021 ft may deepen. Wilson & Chapman's Hendley 1, 3-18-13, ta 3570 ft. Doty Norman B-1, 3-18-13, lcn. Henry Norman 1, 3-18-13, rig. Marine Oil Co.'s W. B. Thompson D-1, 3-18-13, rigged up and sd. P. Winn Est A-2, 11-18-13, ta 3586 ft.

WASHINGTON COUNTY —Lincoln Lease Holding Synd.'s Townsite 1, 3-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 2-16-32, ta 650 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

VAN BUREN COUNTY — J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7-12, sd 5710 ft.

## MISSISSIPPI

ADAMS COUNTY—Ark. La. P. L. Co.'s Brandon Halls Farms Inc. 1, 32-8n-1w, rigged up and sd.

CLARKE COUNTY, (Quitman Dist.)—Gulf Ref. Co.'s Long Bell Lbr. Co. A-1, sw sw 10-2n-16e, mov in rig.

CLAY COUNTY—Ohio Oil Co.'s Cantrell 1, ne ne 16-15-5e, elev 270 ft hole reported caving did not set 6⅝ cas, gas show in 1½ ft sand td 4477 ft.

CHICKASAW COUNTY—Hightower & Golson's Fleming 1, 20-13s-3e, sd wo 6-in cas 1505 ft.

HUMPHREYS COUNTY—Danciger O&G Co.'s Bellgrade Lbr. Co. 1, nw nw 29-14n-4w, sd wo surf cas 50 ft.

JASPER COUNTY, (Bay Springs Dist.)—Bay Springs Pet., Inc.'s J. H. Keyes 1, nw ne 21-2n-10e, sd in Wilcox 2320 ft.

JEFFERSON COUNTY — M. M. Stokes' School Board 1, 14-10n-2w, 12-in cas 125 ft sd for fuel 960 ft in gummy shale.

MONROE COUNTY, (Amory Dist.)—Amory Dev. Co.'s Bourland 1, 2-15-19, ta in brown sand 3007 ft. P. J. McAlpine's Cowart 1, 2-12s-19w, casing parted at 1500 ft sd in lime 3404 ft. Associated Royalties' School Board 1, sw se 16-15-17, ta 60 ft.

NEWTON COUNTY, (Newton Dist.) — Dalton Dev. Co.'s Majure 1, se se 25-6n-11e, partly rigged up and sd.

NOXUBEE COUNTY, (Macon Dist.) — Thompson O&G Synd.'s Donahue 1, se ne 25-16n-17, elev 280 ft 12½ 20 ft base Selma 490 ft base Eutaw 870 ft (corrected) cored hard sand 1519-31 ft fsh slip 1531 ft.

RANKIN COUNTY, (Jackson Dist.)—Gulf Ref. Co.'s Hanna A-1, nw se 23-5-1e, 15½ cas 82 ft 12½ 840 ft dr sandy shale 2442 ft. Atkisson & Dyer's Valentour 1, 18-5-2e, sd 20 ft.

SCOTT COUNTY—Culley et al's Owen 1, 2-8n-9e, dk.

WARREN COUNTY, (Vicksburg Dist.)—Eagle Lake O&G Co.'s Kiger 1, sw ne 9-18-2e, sd 2607 ft.

WEBSTER COUNTY — P. J. McAlpine's Henley 1, 15-21-11e, coring 1796 ft.

WINSTON COUNTY, (Louisville Dist.)—Miss. Drilling Co.'s Scarbrough 1, nw nw 15-13n-14e, dr lime and shale 3581 ft.

YALABOUSHA COUNTY, (Water Valley Dist.)—J. D. Collett et al's Blackmer 2, ne sw nw 14-11-4w, ta in quartzitic material 3478 ft.

## ALABAMA

MADISON COUNTY — Tennessee Valley O&G Co.'s Fee 4, 1-4s-2e, no report.

SUMTER COUNTY, (Livingston Dist.)—Forked Lightning O&G Co.'s Nixon 1, 30-20-2w, dk.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, driving 8-in pipe below 1000 ft. Hobson Bros. 1, 9-8-2w, ta 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, ta 700 ft.

## TENNESSEE

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, dr 2331 ft.

## WEST TEXAS WILDCATS

**Completions**

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| CRANE COUNTY— | | |
| H. H. Sides et al, B. P. Nolen 1.. | * | 2068 |
| HUDSPETH COUNTY— | | |
| H. H. Henshaw et al, G. W. Love 1 | * | 690 |
| PECOS COUNTY— | | |
| O. J. Perren et al, Eaton 2..... | * | 1765 |
| W. F. Whitaker & Calloway, Devlin 1 . ..... | * | 450 |

## CENTRAL EAST TEXAS WILDCATS

**Completions**

| | | |
|---|---|---|
| CASS COUNTY— | | |
| R. G. Baker et al, W. R. Carver 1 | * | 3760 |
| GREGG COUNTY— | | |
| Frank Foster & Rhodes, N. E. Williams 1 ..... | * | 3340 |
| SMITH COUNTY— | | |
| C. M. Joiner Pet. Co., Clark-Wright 1 . ..... | * | 4210 |
| UPSHUR COUNTY— | | |
| Gillette & Tarr, Woford 1 ..... | * | 3952 |
| WOOD COUNTY— | | |
| Walmar Oil Co., J. Ivey 1 ..... | * | 4262 |
| Deep Rock Oil Co. et al, Maude Smith 1 . ..... | * | 4644 |

## EAST TEXAS

**Completion**

| | | |
|---|---|---|
| SHELBY COUNTY— | | |
| Joiner et al, Foster & Billingsley 1, J. Bowlin sur ..... | * | 1540 |

HARRISON COUNTY—O. H. Parkening's T. J. Taylor 1, Walter H. Payne sur, sd for fuel in shale and shells 2530 ft. Ryan Cons. Pet. Corp.'s H. H. Key 1, E. Carroll sur, 6⅝ cas 5275 ft at base anhydrites, dr shale 5345 ft, (Trinity test). J. M. Furrh 1, T. J. Copelain sur, dk. J. M. Gholson's Bivins 1, T. D. Peterson sur, sd 2759 ft shale. Olford et al's Bolding 1, W. O. Stanfield sur, sd 2688 ft. Marshall O&G Co.'s J. R. Watson 1, Thos. Iden sur, rig (5000 ft test planned). Lloyd Oil Corp.'s Timmons 1, Jno. Findley sur, 10-inch 240 ft.

HOUSTON COUNTY — Apex Drlg. Co.'s Thompson Bros. Lbr. Co. 1, Lone Pine, dr 935 ft. Jones-Irish Dev. Co.'s Mrs. B. Watters 1, 5¼ mi n Lovelady, spd and sd. Mineral


**TERRIFIC GRIP . .**

*but a harmless bite!*

*"Most Complete Line of Tongs in the World"*

WHEN you apply a Petol Chain Tong, the chain makes a full wrap around the work. A flexible rocking joint between head and handle then tightens the chain so that friction does 90% of the turning. A terrific grip is developed, but teeth are not forced into the work to cut, crush and swedge it. A wonderful tool to handle.

Due to the flexible rocking joint, Petol Chain Tongs release instantly, regardless of the load applied to the handle. They can not jam or freeze. Because of the instant release, they ratchet perfectly—sliding forward freely, and gripping instantly on the downstroke.

Petol Tongs are easy to apply because the "V" shaped jaws rest on the work while chain is hooked. Jaws are one-piece, eliminating spreading or loosening. Material is high grade nickel-chrome steel. Renewable high-speed teeth inserts are furnished. The Petol Chain Tong is guaranteed to be stronger, size for size, than any other chain tong on the market. Made in 10 sizes to handle work from ½" to 22". Write for descriptive folder and prices.

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HOUSTON - - - - TEXAS

NEW YORK HOUSTON LOS ANGELES

Research Corp.'s G. L. Murray 1, 22 mi sw Crockett, dr 1395 ft. Phillips et al's Kennedy Bros. 1, Procella sur, dk. Snow et al's D. M. Heron 1, Procella sur, spd and sd. A. E. Winfree's B. F. Hodges 1, sd at 2300 ft.

MARION COUNTY—Rondeau & Hindman's Lindsey 1, Alex Albright sur, sd 400 ft. J. W. Hamilton's Wood 1, Alex Albright sur, sd 2380 ft. Claunch et al's Laun 1, Henry Fulgram sur, sd 300 ft. Sheldon et al's Brown 1, E. B. Fowler sur, sd 3750 ft.

NACOGDOCHES COUNTY — Big Indian Oil Co.'s J. N. Stewart 1, Black Jack Com, dk. L. E. Trout & Dixon's Blount 1, E. D. Williams sur, dk. Bunte Martin & Scroggins Botaman 1, Boggs Community, sd 1600 ft. Churchill-Armstrong Mack W. Hart 1, moving in rig. R. E. Burt et al's Reese 1, ½ mi s Nacogdoches, sd in sh at 4010 ft. Taylor & Vaughn's Greer 1, 1 mi n Appleby, spd and sd.

PANOLA COUNTY—Dillon & Bradham's Baldwin 1, Hampton West sur, sd 1555 ft. United Prod. Corp.'s Steele 17, B. C. Jordan sur, lcn (Trinity test). Southwestern O&G Co.'s Vinson 1, C. T. Anderson sur, sd 3873 ft. Daisy O&G Co.'s Rucks Hrs. 1, Jno. Palmer sur, sd for water 3264 ft shale. Moses & Wallace's C. L. Daniels 1, Isabel Hanks sur, sd 650 ft. Hoffer et al's Cameron 1, W. A. Lagrone sur, dk. Davidson et al's Latham 1, Wm. Rich sur, bldg dk for deep test, td 550 ft. Ark. La. P. L. Co.'s Werner 14, B. C. Jordan sur, 7-inch cas 4682 ft, showed sw at 4772 ft, coring lime and shale 4894 ft. Nelson et al's Williams 1, Jas. Hanks sur, 12¼ cas 400 ft, sd (corrected depth). Stamps et al's Chadwick 1, W. M. Scontleberry sur, rig.

SHELBY COUNTY—Sloane Prosp. Co.'s F. B. Sandford 1, M. M. Vann sur, base PG 2838 ft, top AC 3294 ft, base AC 3618 (corrected contact), coring 3649 ft. Chapparal Oil Co.'s Holt 2, Matthew Moore sur, claim sand cored 3127 ft. E. L. Chapman's Pickering Lbr. Co. 1, C. F. Henry sur, blew out est 25 mil ft gas spray fresh water, killed and set 365 ft 7-inch casing, still making 3 to 4 mil ft impregnating surrounding sands, trying to kill completely, td 3864 ft. Maulding et al's Frost Lbr. Ind. 1, A. B. Fountain sur, fsh slip at 2805 ft, blue shale. H. H. Gracey's J. A. Morrison 1, Wm. English sur, sd dr water well, td 2600 ft. I. M. Bradley et al's J. J. Asberry 1, G. W. Mitchell sur, sd in sandy lime 3280 ft. T. A. Martin's J. A. Bush 1, Alfred Lindsey sur, dk and moving in rig. Joiner et al's Foster & Billingsley 1, J. Bowlin sur, dry and abn, td 1540 ft in shale. Schultz et al's Hughes 1, J. C. Clay sur, dr lime 4000 ft. C. H. Tautenhahn's J. C. Bogard 1, Thos. Baker sur, sp partly rigged up, sd 20 ft. Glidden & Stephenson's Pickering Lbr. Co. 1, Jonas Harrison sur, drill stem recovered, top PG 3059 ft, dr shale 3160 ft. Ridgeway et al's Polley 1, Domingo Gonzales sur, dk. Geo. L. Pace's Powers 1, Jno. Timms sur, dk. T. W. Tennent's Henry 1, Jno. Spradley sur, top PG 2100 ft, sd wo 2450 ft. K. H. Francis' Jno. Mims 1, Mary Smith sur, 13⅜ cas 40 ft, 10-inch 393 ft, dr shale 1620 ft. Smith et al's Carroll 1, J. A. Parker sur, 10-inch 180 ft, dr 1820 ft.

## SOUTH TEXAS

ATASCOSA COUNTY — Geo. Keith, Jr.'s Martin 1, 3 mi s Amphion, sd 2100 ft.

BASTROP COUNTY—Schimmel & Batts' Trigg 3, J. Doyle sur, 6⅝ casing set 1360 ft, serpentine topped 1365 ft, total depth 1430 ft. Smith & Burns' Marburger 1, King and Millett sur, dr 519 ft. Texas Dev. Co.'s Ray 1, Christian sur, dk.

BEE COUNTY—Alexander et al's McFall 1, 3 mi s Skidmore, sd 1510 ft. Cosden Oil & Rowan and Moore's Freeland 2, Pace sur, sd 4297 ft. J. S. Mauldin's Mauldin 1, G. A. Kerr sur, sd 3930 ft. Mauldin and Fisher's Kimball 1, Stephin Winship sur, sd 3543 ft. T. B. Slick Estate's Ray 1, Kerr sur, lcn. United Prod. Co.'s Ray 39, T. Hanson sur, dr shale, 3032 ft.

BEXAR COUNTY—J. E. Anderson's San Antonio Irrigated Farms 1, lcn. Witherspoon Oil Co.'s Knapick 1, J. Rialls sur, set 6⅝ in csg 1307 ft; Anoil 1, Rialls sur, lcn.

BLANCO COUNTY—Hardy Sitton's Standeford 1, sur 155, dr 1090 ft; McMillen 1, sur No. 125, sd 686 ft. Forest Oil Co.'s Hohenberger 1, sur 94, sd 712 ft.

BROOKS COUNTY—Ike Howeth's Singer 1, sur 436, no report.

CALDWELL COUNTY—Ralph Lewis et al's Keith McGee 1, Pinchback sur, dr 100 ft. Mills and Chapman's McMahon 1, Pinchback sur, sd 2490 ft. Joe Bruner's Malone 1, A. Floyd sur, set 6⅝ in csg abt 2507 ft.

COMAL COUNTY—Caldwell and Lanier's Byler 1, HE&WT sur No. S-894, 8⅛ in csg set 704 ft, re-dr.

DE WITT COUNTY—Gibson and Strum's Clark 1, Dolores Aldrete sur, ru and sd.

DUVAL COUNTY — John F. Camp & Southern Crude Oil Pur. Co.'s Hubbard 1, sec 75, test dry sand 2534-39 ft, dr ahead. Duval Oil Co.'s Bishop Land and Cattle Co. 3, sec 135, dk, prep to ru. Humble O&R Co.'s Kohler 50, sur 164, dr 7121 ft. S. J. Carpenter's Benavides 1, sec 1, blk 38, Mesquite ranch, sd 1725 ft. L. E. Lockhart's Sutherland 1, sec 511, spudded and sd for water. O'Byrne et al's Weil Bros. 1, sur 568, abn 2655 ft. Frank Garvis' Shallert 1, sur 255, dk. Coffee et al's Garza 1, center sur 49, no report.

GOLIAD COUNTY—Nuehaus Drlg. Co.'s Pettus 1, Maria de Jesus Ybarbo sur, recompleted, total depth 4286 ft, making 50 bbls oil, 10,000,000 cu ft gas and little water.

GUADALUPE COUNTY—John F. Camp's Sue Denman 1, William Arrington sur, set 67 ft 8 inch csg, now dr 1700 ft. Adams, Lysles, North and Walton's A. Zobrowoski 1, J. D. Clements sur, sd 2212 ft, flow about 8 bbls oil daily. Harry Bruner's Jim Sherrill 2, Geo. Allen League, sd for rotary at 190 ft. S. A. Oil and Royalty Co.'s Dibrell 1, sec 6, lcn to be dropped until material moved on. Schleter, Atherton and Armstrong's Ogletree 1, Robert Smith sur, sd 1745 ft. C. McGarity et al's Wesch 1, Thompson sur, no report. Linne et al's Linne 1, V. Cortario sur, to spud in.

HAYS COUNTY—J. C. Jones et al's Byler 1, John Ingram sur, sd 925 ft.

JIM HOGG COUNTY—D. C. Dewitt's Gomez 1, section 12, sd 400 ft. Cole Pet. Co.'s Palacios 1, sur 231, sd 1360 ft.

KARNES COUNTY—V. F. Neuhaus' I. L. Russell 1, Carlos Martinez sur, dk.

KENDALL COUNTY—R. M. Perkins' (Sartain) Lawhorn 1 (replacement hole) Richardson sur, dr 654 ft. Borget et al's Haag 1, W. Avery sur, dr 1218 ft. Dixon Oil Co.'s Behr 1, Jessie Wilson sur, dr 2713 ft. Hicks et al's Speck and Weidner 1, Thomas sur, dr 255 ft. F. S. Dibble's Ellebracht 1, sur No. 77, sd 50 ft. Hardy Sitton's Garvin 1, Richardson sur, sd 1125 ft.

KERR COUNTY—Herbert Oil Co.'s Witt 1, Hamilton sur, sd 100 ft for months, carried as temp abn. Evans and Gant's Seiker and Mears 1, sec 1605, sd in sandy shale 4031 ft. Evans and Gant's Jeff Love 1, J. Martinez sur No. 1594, sd 4060 ft, wait on 5 3/16 inch csg to deepen. Evans and Sprinkle's Jeff Love 2, sec 1592, wait on 15½ in csg 420 ft. Chester A. Martin's J. E. Young 1, prep to re-dr 1175 ft.

KIMBLE COUNTY—C. L. Bryant et al's Lambert 1, F. Lotta sur, sd 850 ft.

LIVE OAK COUNTY—Catlett & O'Neill's Hatcher 1, Jas. McGloin sur, dr 4460 ft in shale. Houston Oil Co.'s Cartwright 14, Sandman sur, dr 4650 ft. Coquat et al's H. Hewitt 1, Thomas Adams sur, dr 410 ft at last reports.

McMULLEN COUNTY—Brodie, Shearer & Emerich's Shiner 1, sd 2000 ft.

MAVERICK COUNTY—Texas Gas Utilities Co.'s Chittim 8, dr 4385 ft.

MEDINA COUNTY — Frank A. Brown's Fohn 1, J. F. Torry sur, spudded. Genard Bros.' Crawford 1, Keppler sur, dr 957 ft. J. H. Hickey's Jugman 1, sd 565 ft. SunFlower Oil Co.'s Mofield 1, sur 532, sd 2040 ft. Yancy Dev. Co.'s Faesler 1, sur 801, made ds test 1945 ft.

NUECES COUNTY—Gulf Coast Oil Co.'s Harrell 1, GC&SF sur, sand 4856-63 ft test o&g. Houston Oil Co.'s Harrell 2, John E. Dunn sur, wait on cement after setting 5 3/16 csg 4081 ft; Morgan 2, plugged back to 4084 ft, completing. Southern Crude Oil Purchasing Co.'s Stratton 1, Anchow sur, dr 3915 ft.

REAL COUNTY — Evans and Sprinkle's Haby 1, sec 175, running 8-inch casing to 2500 ft.

REFUGIO COUNTY — Blanco Creek Oil

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CASING CUTTER

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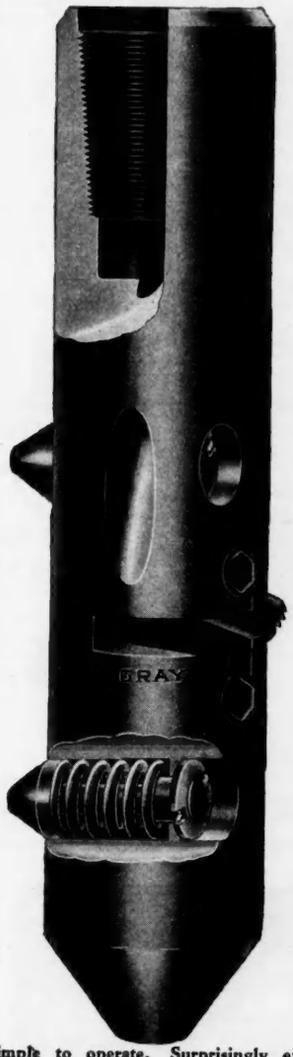


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GRAY TOOL COMPANY

HOUSTON, TEXAS.

Co.'s Dammann 1, blk 16, Bonnie View Ranch, sd 4200 ft. Humble O&R Co.'s O'Conner 1, Keathing sur, set surface csg.

SAN PATRICIO COUNTY—Jacob, Buzzini & Pickett's Baldwin 2, T. Amarro sur, dr 1050 ft, set 10 in csg 300 ft.

VICTORIA COUNTY—Houston Oil Co.'s Konrad 1, T&NO sur, dr 4970 ft in shale. The Texas Co.'s McFadden 3, John M. Rine sur, sand 3079-86 ft, test 800 lbs in 2 min on ½ in choke, new dr 3200 ft. United Prod. Co.'s McFadden 5-A, C. L. Mann sur, spud in.

WEBB COUNTY—Eugene Garner's Billings 1, sur 71, dk. Cole Pet. Co.'s Benavides 2, dr 3010 ft at last report. Geo. S. Marshall's Benavides 1, sur 683, lcn.

WILLIAMSON COUNTY — Bilbrey-Zizinia's Taylor Country Club 1, abn in Edwards 1395 ft. Hays and Gee's Johnson 1, B. C. Low sur, dr 1125 ft. Citizens Oil Dev. Co.'s Jarrell 1, Cook sur, no report; H. Fritz 1, HT&B sur, dr 650 ft; Foorwood 1, test oil 1003 ft, dr ahead.

WILSON COUNTY — August M. Blume's Nickelson 1, C. Diaz sur, dr 1075 ft.

ZAPATA COUNTY—W. T. Henry's Gopher Trust Estate 1, Borrego Grant, re-dr now at 1375 ft. McCaldin, Owen & Newton's Garza 1, sur 161, spudded. National Oil Co.'s of Texas' Luther 1, blk 97, sd 590 ft. Penny Prod. Co.'s Cuellar 1, sur 2, Pappas sub, sd 2055 ft. Pray and Chamberlain's (Whicker) Garza 4, Comitas Grant, to skid dk to lcn. C. J. Webster Oil & Gas Co.'s Benavides 1, sur 12, abn 2020 ft. T. H. Ward's Uribe 1, blk 8, share 7, Borrego grant, ru and sd. O. W. Killam's Bruni 1, Blas Urbe tract, ru. H. L. Sargent's Gutierrez 1, blk 5, Borrego grant, ru.

## TEXAS GULF COAST

### Completions

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| MONTGOMERY COUNTY— | | |
| Price & Wilhite, Juergus 2 ..... | * | 4890 |
| WASHINGTON COUNTY— | | |
| Brenham Salt Dome Deep Test Oil Co., Kramer 1 ..... | * | 4100 |
| Yegus Oil Corp., Graves 1 ..... | * | 2645 |
| Fisher et al, Scholtze 1 ..... | * | 390 |
| BRAZORIA COUNTY— | | |
| Layne et al's Wisdom 6-A..... | 30 | 2404 |

ANGELINA COUNTY—Cameron Lbr. Co.'s Fee 1, 7 mi ne Lufkin, lcn. R. D. Moore's Abney Est. 1, n of city limits, Lufkin, sd in O. S. at 1350 ft. Pollock Oil Co.'s Sessions 1, de la Garza sur, dr 3360 ft.

AUSTIN COUNTY — Parmeson & Caffertey's Wm. Scholeckte 1, sd 1500 ft.

BELL COUNTY—Mildon Oil Co.'s Edds 1, 6 mi e Temple, sd in chalk 400 ft. O. O. Oldford et al's Spankle 2, lcn. Riley et al's J. W. Moseley 1, 1 mi w Haidenhamer, sd 1110 ft.

BRAZORIA COUNTY — Cullen & West's Nash 1, dr 3525 ft sh. D. C. Wellack's J. Hammon 1, td 690 ft, bailed open hole, shw salt water. The Texas Co.'s Belcher 1, se Manvel, dr in sn at 4817 ft. Doran et al's Sparks 1, sd 1360 ft.

BURLESON COUNTY—Maerk & Sons' I. F. Maerk, Sr., 1, dr sn and sh 2380 ft. Reynolds Oil Co.'s Harris 1, 4 mi se Chriesman, sd 400 ft. J. E. Stubblefield's Mitchell 1, sd in gbo 520 ft.

CHAMBERS COUNTY—Gulf Prod. Co.'s Wilburn 4, swbg salt water, little OS, 5170 ft. Humphreys Corp.'s Kirby H., 8, lcn; Eberspacher 1, dr 941 ft sdy li; E. H. Winfree 6, Barbers Hill, dr rk 4954 ft. Pure Oil Co.'s No. 6, Lost Lake, lcn. Sinclair O&G Co.'s Jno. H. Smith 3, 4960 ft li rk. Sun Oil Co.'s Jno. H. Smith 2, dr 5090 ft in hd sn; Smith 3, td 5320 ft, prep to cut out scr and liner; Anne Higgins 1, dr sh 4525 ft; O. H. Winfree 2, wo st dr pipe at 3030 ft. Texas Gulf Sulphur Co.'s A. Z. Gardner 1, Moss Bluff, lcn. Texas Co.'s E. H. Winfree 2, cor sn and sh 5550 ft.

FORT BEND COUNTY—Cullen & West's George 1, Thompson dome, dr 3495 ft.

GALVESTON COUNTY — Yount-Lee Oil Co.'s Cade 20, High Island, ru; Cade 22, lcn.

GRIMES COUNTY — Rianjo Oil Co.'s Cuthrell 2, 3 mi e Carlos, sd 100 ft.

HARDIN COUNTY—Plummer & McDaniels' Reed 1, 6 mi e Sour Lake, sd in gbo and li 1325 ft. D. O. Speight's Guidrey 1, dr sh 4120 ft.

HARRIS COUNTY—Mrs. J. C. Baldwin et al's Kitzman 1, 2 mi n Cypress, 3?50 ft sd. Hattie Baldwin Krahan 1, 3 mi n Cypress, sd 495 ft. H. H. Givens & Daybault's Lobit 1, sd 900 ft, 18 mi w Houston.

HILL COUNTY—Hilltex Oil Co.'s Weatherly 1, Weatherly, sd 4000 ft. H. H. Heddie's Gitmore 1, Navarro Co. Sch Ln Sur, sd 870 ft. A. Hausman's Griffith 1, Waddell sur, sd in sh 2675 ft.

LIBERTY COUNTY—J. R. Ingram's C. T. Palmer 1, dr sh 1970 ft. Gulf Prod. Co.'s Boyt 1, Hankamer, sd 6000 ft, will plug back and test upper sand. Tucker et al's Bell 1, Devers, sd 2975 ft. Humble O&R Co.'s Sargent 2, stg at 5927 ft.

MATAGORDA COUNTY—H. C. Cockburn et al's Hawkins 3, Shepherds Mott, dr hvg sh 4882 ft. Ike Loffin et al's Gray 1, Markham, dr 2515 ft gbo.

MILAM COUNTY—W. H. Elliott's Davis 1, sd 2150 ft. Kisker et al's Ward 2, sd 3080 ft. C. M. Joiner's J. A. Foster 1, 12 mi e Cameron, sd 3510 ft. Wilson-Brock E. L. White 1, Sam Frost sur, dr 2635 ft li.

ORANGE COUNTY — Ala-Tex Oil Co.'s Reed 1, 2½ mi se Orange, td 4600 ft, sd 2200. Crews Oil Co.'s Mansfield 1, Orange, sd 1415 ft. Jefferson Prod. Co.'s Bland 1, sd 2920 ft.

POLK COUNTY—Sunshine Oil Co.'s Olliver 1, 8 mi se Livingston, ru. W. H. Freeman et al's Freeman 2, 4 mi se Leggett, sd 3110 ft. Transcontinental Oil Co.'s M. E. Roberts 1, 735 ft w sn.

SAN JACINTO COUNTY—E. P. Edwards et al's J. R. Bennett 1, nw Cold Springs, spd and sd.

TYLER COUNTY—Allied Prod. Co.'s Wilson 3, 16 mi ne Woodville, dr sh 4962 ft.

WASHINGTON COUNTY—Penn Tex Oil Co.'s Kansas 2, Brenham, 3285 ft sh, prep to set 1000 ft 8-inch csg.


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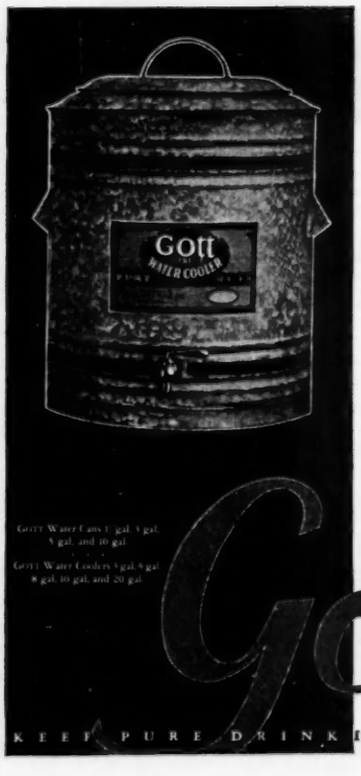


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## PERMITS

(Continued from page 67)

## LOUISIANA

IBERIA PARISH—Jefferson Lake Oil Co., New Orleans, Lake Peigneur 21, 300 ft n and 43 degrees w of well No. 20 in Lake Peigneur.

OUACHITA PARISH—Carbons Consolidated, Monroe, La., Guthrie 6, 49-20n-4e, 6985 ft n and 6013 ft w of the cor of Sections 49, 26, 25 in Section 49.

RAPIDES PARISH—Pelican Nat. Gas Co., Shreveport, La., Long Bell Lbr. Co. 1, 3-1n-3w, 330 ft n and 330 ft e of sw cor of section.

RICHLAND PARISH — Southern Carbon Co., Monroe, La., R. & D. 9, 18-17n-6e, 1320 ft n and 660 ft e of sw cor of section.

## ARKANSAS

DREW COUNTY — Co-operative Dev. Co., R .L. Hardy 1, 1016 ft s, 871 ft w ne cor, se se 6-13-7.

# ▼ LETTERS ▼

Dear Sir:

The publication of my letter in your issue of July 17th concerning production in the Evangeline field for the years 1902-3 and 4 certainly brought QUICK results as on the 18th I received letter from Mr. David Donoghue of Fort Worth, Texas, reading in part as follows:

"I happen to have the figures as put out by the United States Geological Survey.

| | |
|---|---|
| 1902 | 548,617 Barrels |
| 1903 | 892,609 Barrels |
| 1904 | 2,905,527 Barrels" |

This is another evidence of the *great value of* THE OIL WEEKLY.

Yours very truly,

P. L. LAWRENCE,
*President.*

*Louisiana Oil & Royalty Company,*
*Crowley, Louisiana.*

---

Dear Sir:

The present condition of the oil industry is the subject of much discussion throughout our country today, and yet I question whether we have had sufficient quantity of genuine, unbiased and unprejudiced thought and discussion in the most vitally concerned group—the oil industry itself.

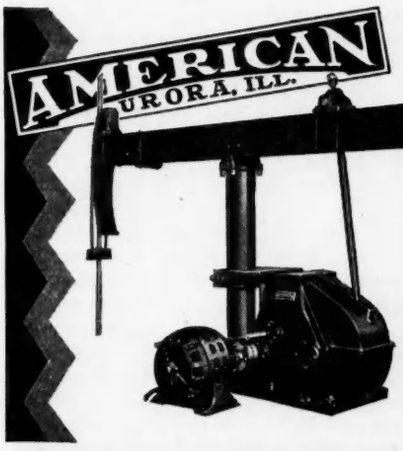
The following discussion is an attempt to present what are, in the writer's opinion, some of the factors involved.

There is one point on which we all agree—that the supply of crude exceeds the demand to such an extent that prices have dropped to a very low level. This is not a new experience in American industries for we have only to consider the case of cotton, wheat, coal, iron, etc.; nor is it a new experience for the oil industry as will be seen if we go back to the early days of flush production at Spindle Top, Sour Lake and Humble and consider the crude prices existing prior to the creation of a fuel oil demand in the railroad and other industries, and before the advent of the automotive gasoline demand.

For the last several years the question of overproduction in Mid-Continent, Texas and California oil fields has been assuming greater importance. The development of the East Texas area since September, 1930, has certainly had disastrous effects on the situation, but it is merely the "straw that broke the camel's back" and not entirely responsible for the present situation. The terms "unit operation," "proration," "curtailment," "conservation" and "government control" have been commonly discussed for a number of years.

There is no flagrant waste of our oil resources when you exclude that lost in accidental fires and the small amount of waste oil burned in the interest of safety.

Why not be honest with ourselves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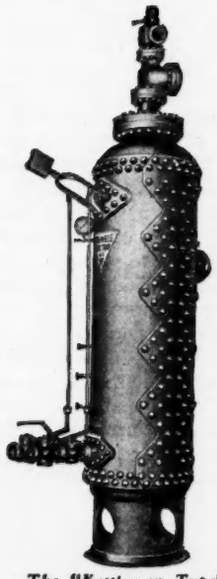

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Do you need photographs of your equipment in use in the field? We specialize in photographs of oil field equipment in the Gulf Coast territory.

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CALVIN WHEAT COMMERCIAL STUDIO

and admit that not one in a hundred is interested in oil conservation, but that what we do want is some means to secure for the producer a price which will insure profits under the present methods of operation, extravagant though they may be?

There are few other industries in the world which have enjoyed such handsome profits in the face of what might well be termed haphazard, extravagant and remorseless expenditures of energy, man power, materials and money.

It would be well to remember that conservation as applied to the oil industry may refer to more than just oil as it is brought to the surface of the ground. Take the one item of natural gas, which is the very life of economical oil production. If there is anything in the oil industry to be conserved it is the potential energy and fuel value of its natural gas. There is no quarrel with cheap gas used freely in producing areas or the enormous quantities consumed daily by our cities and industries, but it is nothing less than criminal negligence to permit the continued absolute waste of the tremendous amount of energy as is taking place in practically every oil field in the United States today. This gas is invaluable to the producer when it is considered that the ultimate recovery decreases and the lifting cost increases due to its absence. It should not require legislation to cause the industry as a whole to adopt conservation methods of repressuring and underground gas storage which have been found worth while by a number of producing companies.

Other industries, when faced with the problem of overproduction and the consequent reduction in price, have attempted to meet the situation in one or more of several different ways. Some of these are: eliminate the surplus by production control; reduce costs so that present outlets will increase their takings, and heretofore prohibited fields will become consumers; locate new consumers by research and investigation.

As responsibility for the maintenance of proper field conditions is placed on producers the excessive profits from flush production will be reduced only to be returned in lower lifting costs and greater ultimate recovery. This will not discriminate against any operator, but will tend to promote more orderly and carefully planned drilling. Efforts at production control to date would be laughable were they not tragic.

Cost reduction should not be confined to any one phase of the industry, nor should it be confined to any one department. Improved management and standardization will reduce costs, but it should be remembered that improvements in refinery and marketing methods are just as essential as improvements in drilling procedure. Each of the phases is entitled to reasonable profits and any condition which deprives any one of them of profit is unsound. Extravagance is most apparent in the producing phase but we may be sure that it is not here alone that great economies may be effected.

New uses for petroleum products will continue to appear as a result of research and development work.

There is no Alladin's lamp to rub or Ouija board to guide us in the problems which we face, so we might as well get together and solve them ourselves.

Yours very truly,
G. E. NEVILL.

*Beaumont Iron Works Company,*
*Beaumont, Texas.*

N. M. GROVE

**N. M. Grove** recently was appointed sales representative in the Mid-Continent for Republic Rubber Company of Youngstown, Ohio, manufacturers of mechanical rubber products. Mr. Grove formerly was with Gustin-Bacon Manufacturing Company and is well known to the industry in his territory.

**Gulf Coast Exploration Co.**

*Torsion Balance Surveys*

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Field Gas Testing. Analysis of oil field brines, gas minerals and oil.
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The World's Largest Water Developers*... with associate companies the world over, offer you the benefit of the knowledge gained in 50 years' leadership in the deep-well water supply field to solve your water supply problem

ECONOMICALLY • QUICKLY • SATISFACTORILY

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LAYNE DEEP WELL TURBINE PUMPS
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## EXTRA-HEAVY COLLOIDAL DRILLING MUD

**BAROID is a uniform, high-grade specially prepared pulverized weight material for increasing the weight of Drilling Mud to overcome high gas and water pressures. It is packed in 100-lb. sacks and carried in stock in all oil fields. Strict laboratory control assures highest quality in manufacturing and experienced field men provide exceptional service for users.**

**BAROID has a specific gravity of 4.2 and enables the preparation of pumpable muds weighing 140 to 150 lbs. per cubic foot. Drilling Muds made up from BAROID will not settle out if circulation is suspended and eliminate danger of stuck drill pipe and fishing jobs. Write for literature.**

# AQUAGEL

## TROUBLE-PROOF COLLOIDAL DRILLING MUD

**AQUAGEL is a uniform, specially treated high-grade clay packed in 100-lb. sacks and carried in stock in all oil fields. Mixed with water in the proportion of 3% by weight, one ton of AQUAGEL makes 180 bbls. of Drilling Mud. AQUAGEL provides the lowest-cost Drilling Mud and assures an adequate supply of gel-forming colloids which prevents caving, stuck drill pipe and casing, loss of circulation, mudding off of low-pressure sands and gas-cutting. Lubricates drill pipe and walls of the hole. Write for literature.**

AQUAGEL helped drill the C.C.M.O. world's deepest well.

## LEMCO MUD SCREENS

A trouble-proof, mechanically vibrated screen for removing sand and shale from Drilling Mud. Saves its cost many times over by reducing abrasion of pump parts, by reducing quantity of clay or weight material purchased and by elimination of construction costs for mud ditch or slush pit. Literature on request.

## MARTIN-DECKER AUTOMATIC MUD SCALE

A new and improved trouble-proof device—easily installed—for continuously indicating and recording on a chart the true weight of your mud. An important safeguard against danger from blowouts. Literature on request.

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Address.....

OW-Aug. 14

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## PEDEN COMPANY, HOUSTON, TEXAS

*Stocks carried in all oil fields.*

***Flexible!*** ***Flexible!***

***Flexible!*** ***Flexible!***

***Flexible!*** ***Flexible!***

**The Flexible Stuffing Box you see in the cut put on a well that pumps by heads and pumps off, needed no attention so far for over two months. BEFORE, the packing burned out every 24 hours and they could not let it go any longer than 48 hours but had to repack.**

**This statement is made by the Superintendent in charge of the lease with the Continental Oil Co., Wichita Falls, Texas, district.**

**The Flexible Stuffing Box moves with the sway of the polish rod and it is left to your imagination as to its merits for that reason. Involved: lubrication, salt water pitting, wear, cost, work, friction, breaking out of top nipple, freedom of the rods on the down stroke, etc. PRICE, 12.00.**

***Write for information on the following:***

**ROD AND TUBINGLESS PUMPING, PACKER FLOWING, AGITATING, VIBRATION PUMPING, *(ever ready on the end of the line to make changes)* AUTOMATIC LOCK TUBING FLOW AND PUMPING PACKER.**

# CHARLES STARYSKY

**BOX 224** **WICHITA FALLS, TEXAS**

## IT HAS TO BE PLIABLE

**No gentle treatment here! We are testing the toughness of the steel wire used for Yellow Strand Rotary Drilling Lines. Not just *bends* — but *reverse* bends, through an arc of 180°. It must withstand a required number of bends before breaking, and a number of other severe tests, to be used at all.**

**You need a line of *proved* toughness and pliability for those multiple sheaves. You get these in Yellow Strand, the super line, together with resilience and strength, which spell stamina. No internal stresses in our Flex-Set Preformed Yellow Strand. Try it.**

***Get Catalog 40***

**Broderick & Bascom Rope Co., St. Louis**

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FACTORIES: St. Louis and Seattle

**We also manufacture Patentsteel, Extra Strong Cast Steel and Cast Steel Cable Tool Drilling Lines, Sand Lines and Pumping Lines.**

P15

# Yellow Strand Rotary Drilling Lines

MADE OF WIRE DRAWN TO OUR SPECIFICATIONS FROM GENUINE SWEDISH STOCK

# New Equipment for the Field

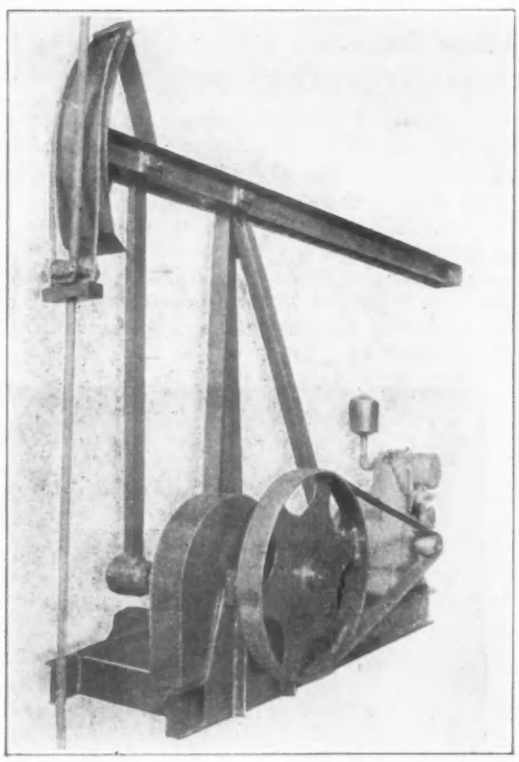
## MACHINERY - TOOLS CATALOGS - BOOKS

▼ ▼ ▼

### Pump Jack

**AMERICAN CRANE COMPANY**

Ameriman Crane Company is introducing a new pump jack of all steel construction, electrically welded throughout. The main base frame, built up of channels and plates, and the sampson post, built up of channels and tee bar together with the shaft bearing retainers, is of one single unit. The walking beam is composed of two channels with the bearing in the top of the sampson post mounted between the channels and bearing for the upper end of the connecting rod also mounted between the channels. The two channels are welded together by connection plates and the semi-circular polish rod guide with the self equalizing cable support, all welded solid to the beam. This construction of beam with high grade steel hoisting cable connection to the cross bar carrying the polish rod clamp offers a flexible and effective means of connection to the polish rod in a manner to insure the pull of the rod in alignment with the stuffing box.



*American Crane Company Jack*

The crank shaft, crank and connecting rod pin are all one solid unit of steel parts completely welded before machining.

The gearing is of all steel, turned from solid blanks and cut by generating method insuring smooth and easy running.

Both ends of the connecting rod and top of the sampson post, both ends of crank shaft and both ends of jack shaft are equipped with high duty roller bearings, arranged with Alemite high compression lubrication.

The gears are covered by all-welded sheet metal case for protection of the gears and to avoid accident.

The machine is built with belt drive, with ample space for mounting any ordinary type of gas or gasoline engine or electric motor or it may be furnished without power, arranged for belt drive from some external source. It is also furnished with electric motor with additional gear reduction with the motor driving direct into the gearing.

All these types are standard from stock for any of the various combinations of drive.

### Control Choke

**THE KEROTEST MANUFACTURING COMPANY**

The Kerotest Manufacturing Company of Pittsburgh, have introduced a new and novel design of control choke or flow bean to be used in prorating wells or in holding back pressure to prevent undue flow of sand from the well.

They are made with forged steel body and bonnets, cast steel yokes, alloy steel stems, hardened steel orifice bushings and needle controls. The design is very strong and massive and is suitable for working pressures up to 3000 pounds per square inch.

They are regularly made in two-inch, three-inch, four-inch and six-inch sizes in both tee and cross type of bodies. The cross type body has proven adaptable to East Texas fields where it is placed at the top of the well setting in direct line with the tubing. By this installation, it is possible to withdraw the needle control clear of the passageway and give a clear opening for the swab to pass through the control choke and fittings into the tubing. The tee type is most commonly employed on the outside lines or flow arms and is used as an angle valve or elbow permitting of flow from the horizontal to vertical position or vice-versa.

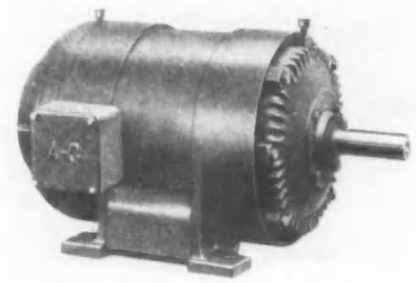
This addition to the Kerotest line is regularly carried in stock by their field distributors, Oil Well Supply Company and Norvell-Wilder Supply Company at all their branch stores.

### Explosion Proof Motor

**ALLIS-CHALMERS MANUFACTURING COMPANY**

Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin, has developed a new line of explosion-proof motors that is approved for use in hazardous atmospheres such as are encountered in oil refineries, gasoline plants, paint, varnish and lacquer plants, and similar installations where explosive atmospheres are encountered. These motors have been tested and approved by the Underwriters' Laboratories, and carry the laboratory label for use in Class 1, Group D locations, gasoline, (pyroxoline, lacquer vapor.)

The construction of this explosion-proof motor is along the same general lines of the Allis-Chalmers totally enclosed, fan-cooled motor, having the same simple design, with all parts



*Allis-Chalmers Motor*

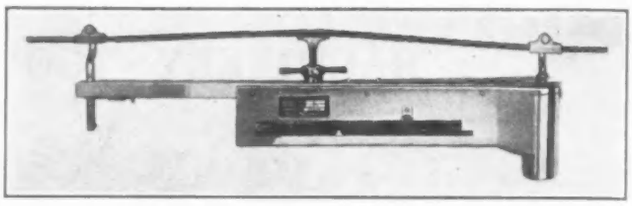
readily accessible. Its special features include extra long bearing seals to prevent the escapement of flame and to cool the gases below the point of ignition, special alloy steel cap screws that fit into tapped pockets, and unusual sturdiness to safely resist stresses due to possible internal explosions or flashes. In addition to the sealed motor leads, a special explosion-proof cast iron conduit box gives additional protection against possible contact with surrounding air.

## Tensiometer

**HILLS-McCANNA COMPANY**

Hills-McCanna Company, Chicago, announces a Tensiometer which gives the tension on wires, cables and lines.

The Tensiometer, built for service in the field, is constructed of a heavy aluminum case with all exposed parts either chromium plated or made of stainless steel. This instrument has an overall dimension of 2½ feet and weighs



*Tensiometer*

14 pounds. It is designed to test all wires and ropes up to one inch in diameter and has a tension capacity of 16,000 pounds and can be supplied for even larger sizes for special stream line aeroplane cables. This instrument is very sensitive and is claimed to register the slightest change in tension while in place.

It is used largely in the oil industry in connection with determining the pull of the cable when the drill is stuck and prevents a greater pull being exerted on the cable than is safe. The meter is also used for fishing and to record graphically the weight of the drill all at one time.

The Tensiometer is operated by hooking it onto the wire in any position. The center bearing is tightened, thus deflecting the cable. A correct reading is given at once and is taken directly from the scale in pounds.

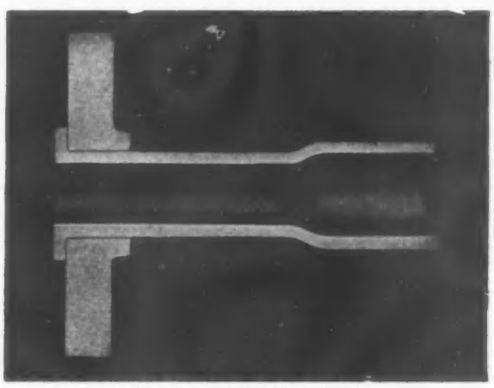
Further information concerning this meter may be obtained upon request to Hills-McCanna Company, 3349 Nelson Street, Chicago.

## Welding Stubs

**NATIONAL VALVE COMPANY**

National Valve & Manufacturing Company, Pittsburgh, has placed on the market two Navco welding stubs designed to eliminate the problem of aligning bolt holes and prevent distortion of the lap in a welded line.

The "cupweld" stub affords reinforcement and support and is designed to be advantageously used in bends in a line where expansion stresses are high. The "cupweld" butt provides a tolerance of as much as one-half inch in joint lengths, rendering non-essential extreme exactness in the length of connecting pipe.



*National Welding Stub*

While it does not offer as many advantages as the above type, the Navco "buttweld" stub can be used economically in welded pipe lines, according to the manufacturers. Particular attention has been given by them to machining the V bevel to conform with standard pipe mill practice.

Additional information concerning these two welding stubs may be obtained from the National Valve & Manufacturing Company, 3101 Liberty Avenue, Pittsburgh.


**"THE STRONGEST GEARED POWER FOR ITS WEIGHT IN THE WORLD"**

© 1930 Beebe Bros.

Beebe Bros.
ALL STEEL HAND HOIST
SEATTLE, U.S.A.
TRADE MARK REGISTERED

**PRICE $80**

Steel Tail Hold Yoke $4 extra. Truck attachment plate $10 extra.

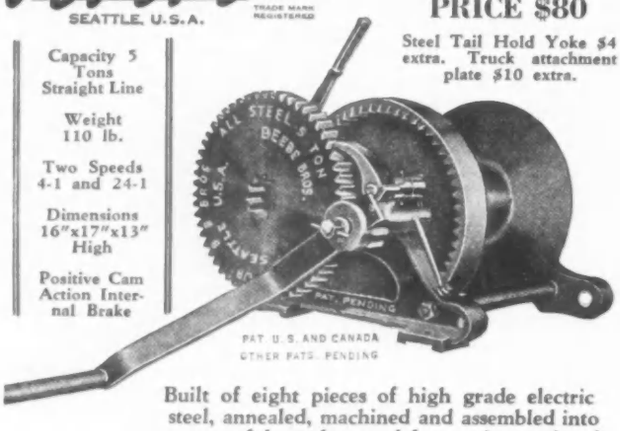
Capacity 5 Tons Straight Line

Weight 110 lb.

Two Speeds 4-1 and 24-1

Dimensions 16"x17"x13" High

Positive Cam Action Internal Brake




**Built of eight pieces of high grade electric steel, annealed, machined and assembled into a powerful, modern tool for use in any hand hoisting, lowering or pulling. Quickly set up and easy to operate. Positive brake control.**

**Make this sturdy little worker a part of your regular equipment. It will handle innumerable jobs with a saving in both time and labor.**

*For Sale by*

THE NATIONAL SUPPLY COMPANIES

# Manufacturer and Supply Dealer Notes

▼ ▼ ▼

**Webster Engineering Company,** Tulsa, has just published the Webster Manual and Data Book, after two years of compilation. It is a collection of information on industrial gas-fired burner design and application, and contains 120 pages.

Copies may be obtained by writing the Webster Engineering Company, Tulsa, Oklahoma.

---

**Layne & Bowler Company,** Houston, pioneers in the development of oil well screen, and its subsidiary, Layne-Texas Company, largest water well developers in the world, jointly held their annual picnic at Galveston, Texas, July 31, a gathering held each year for employes and their families on the birthday of the late M. E. Layne, founder of the companies.

M. E. Layne, who died late in 1927, paved the way for Layne & Bowler Company shortly following the discovery of the first gusher oil at Spindle Top field in the Coastal Country. Engaged in 1901 in the water well drilling business in Northwestern Iowa, he came to the Gulf Coast to investigate the sand conditions in oil wells. He set out to develop a special wire-wrapped screen to protect wells against plugging up from fine sand after visiting the famous Heywood well at Jennings, Louisiana. In January, 1904, he organized Layne & Woodburn, a partnership, for the manufacture of Keystone wire-wrapped screen under Layne patents, and opened a shop in Houston. Shortly thereafter, as the business rapidly grew, the shop was moved to larger quarters, and the partnership firm of Layne & Bowler, with P. D. Bowler, was formed. In 1907, Layne & Bowler Company was incorporated, taking over the partnership of Layne & Woodburn, and the manufacture of irrigation pumps was started, and the company also started doing well contracting. The last two enterprises later gave rise to other companies, Layne & Bowler, Inc., at Memphis, Tennessee, manufacturing pumps and Layne-Texas Company, a subsidiary of Layne & Bowler Company, doing water well contracting.

L. A. Layne, son of the founder of the companies, is president of both Layne & Bowler Company and Layne-Texas Company. J. H. Teer is vice president and general manager, and J. W. E. Stephen is secretary-treasurer of Layne & Bowler Company, and O. F. Jensen is vice president and general manager, and O. P. Woodburn is secretary-treasurer of Layne-Texas Company. Layne & Bowler Corporation, headquarters in Los Angeles, is another of the organizations in the group and is a sister company of Layne & Bowler Company and Layne & Bowler, Inc., and like these two companies, has its own subsidiaries. The three companies and their 19 subsidiaries give Layne products world-wide distribution.

**Carl O. Jensen,** American Iron & Machine Works Company, California representative is spending several weeks in the East Texas field. His headquarters office is 407 South Green Street, Longview, Texas.

C. O. Jensen

---

**Oklahoma Contracting Corporation,** pipe line engineers and contractors, announces the removal of its general offices in Dallas to the Tower Petroleum building, Elm and Saint Paul Streets.

---

**Spang, Chalfant & Company, Inc.,** Pittsburgh, has recently installed new electric welding equipment in its Etna plant which increases the facilities for manufacturing double length pipe in all sizes and gauges from two-inch to 20-inch O.D. up to 55-foot maximum lengths, a process in pipe merchandising that offers greater economies in shipping and installation costs in the field.

Flash butt-welding of pipe is effected mechanically in a large specially built machine, and is the process of joining lengths of pipe end to end through application of heavy electric current; securing complete fusion of the metal.

Electric current is applied through heavy copper connected jaws or bands which clamp each piece adjacent to the ends where the weld is made. The pieces are then brought together mechanically, with the current on, which forms an arc and causes a continuous flashing of the metal from the fusing ends and heats the ends to a uniform welding temperature.

The current is then cut off and heavy pressure instantly applied compressing the joint and forcing out practically all of the plastic material, including slag, and oxides, and leaving joint of parent metal so closely knit that it is impossible of detection. During the process of welding the grain structure of material is refined and tests prove that pipe welded in this manner is stronger at the point of weld than adjacent material.

A special trimming machine then removes the rough edges of the flash from the joint, both inside and outside, after which the double length pipe is hydrostetically tested.

---

**The Carrick Engineering Company,** 431 South Dearborn Street, Chicago, announces a new four-page bulletin "Carrick Stiff-Arm Fittings." Of entirely new and improved design these fittings offer further evidence of the important changes recently made in the "Carrick System of Automatic Combustion Control."

*Layne & Bowler Employes Picnic at Galveston*

# Squeaks From the Bull Wheel

▼ ▼ ▼

Henry: "Just one more kiss dear; just one more like the last one."

Marge: "But Henry, there isn't time. You must leave in 10 minutes."

---

"Tommy, can you tell me one of the uses of cowhide?"

"Er, yessir. It keeps the cow together."

---

She came home with her hat on one side and her clothes all crushed looking.

"Looks as though she's been knocked down by a motorist," said one neighbor sympathetically.

"Or picked up," said another thoughtfully.

---

A society woman wrote to an army officer: "Mrs. John Sears DeVille requests the pleasure of Captain Smith's company at a reception on August 16."

The next day she received this note of acceptance: "With the exception of 14 men who, I regret to say, have a week each in the guard house, Captain Smith's company accepts with pleasure Mrs. DeVille's invitation for August 16."

It was getting very close to the time for the celebrated guest to make his speech.

The chairman, looking about the table, came over to the speaker and whispered: "Shall we let them enjoy themselves a little longer, or do you think you'd better begin your speech now?"

---

Conductor (after stumbling over obstacle in the aisle)—Madam, you must not leave your valise in the aisle.

Colored Woman—Foh de land sakes, dat ain't no valise; dat's my foot.

---

An absent minded grocer called on his old friend, the family doctor, one evening. They chatted for a couple of hours, and as the grocer rose to go, the doctor asked: "Family all well, I suppose?"

"Good heavens," exclaimed his visitor, "that reminds me. My wife's having a fit."

---

She—"I warn you, I'm necking against the doctor's orders."

He—"Gosh, are you sick?"

She—"No, but the doctor is my husband."

Doctor: "Sit down, sonny, you have shown good manners long enough."

Small Boy: "It ain't good manners, doctor, it's a boil."

---

**A Modern Fable**

A mule and an old Model T are said to have met on the highway.

"And what might you be?" asked the mule.

"An automobile," answered Model T, "and you "

"I'm a horse," replied the mule.

And they both laughed.

Moral—A man is not necessarily a G. A. R. because he wears a union suit.—Pure Oil News.

---

A dealer in South Georgia carried Rastus Johnson during the spring and summer so that Rastus could make his cotton crop. It turned out to be a good year and Rastus had enough money to pay his account at the store and still have some left over.

After paying his account, he went across the street and bought quite a lot of goods for cash. The dealer who had given Rastus so much credit learned of this and the next time he saw him said, "Rastus, I carried you all spring and summer, and now you go across the street and buy stuff for cash. What's the idea?"

"Why, Mistah Boss," replied Rastus, in a surprised tone, "Ah didn't know you-all sells fo' cash!"

---

In days of old when nights were cold,
It took two fleeces from the fold
To dress a lady fair.
But in these days of jazz and bob,
A little silkworm does the job
With time galore to spare.

---

One Farmer: Out where I come from the squashes grow so big we have to haul them in with a team of horses.

Another One: That's nothing—out where I live corn grows so fast that we have to keep two men at the base of each stalk to chop the ears off as they go by, and one day one of the fellows missed the ear and it caught under his belt. By heck you won't believe it, but it carried him up so far that we had to shoot dog biscuits up to him with a shotgun to keep him from starving.

---

"Now," said the super salesman, "this instrument turns blue if the liquor is bad—green if it's good."

"Sorry, but I'm color blind," apologized the prospector. "Got anything with a gong on it?"

---

"How can I make anti-freeze?"

"Hide her woolen pajamas."


**CUT YOUR *Round Trips* IN HALF**

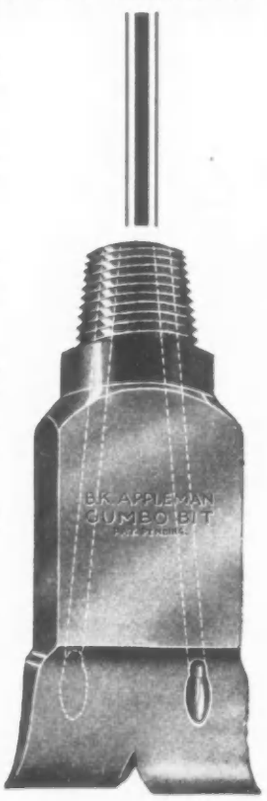
*with an APPLEMAN*

**Driller:** "Get a move on, there, Derrick Man, shut that pump down; we've got to come out of the hole again."

**Derrick Man:** "Again? Why, we haven't been in the hole forty-five minutes yet!"

**Driller:** "Well, get a move on now, anyway. Things will be different tomorrow . . . I got the Supe to have some APPLEMANS sent out here in the morning."

**Derrick Man:** "Oh, boy! *now* we'll out-dig old Sandy!"




B. K. APPLEMAN
BEAUMONT, TEXAS

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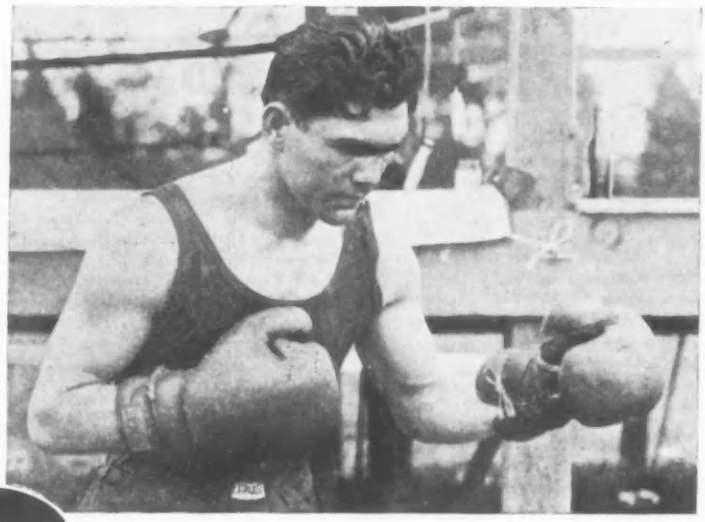
**STRAIGHT FACTS . . The 18th of a series and the 4th advertisement on Sucker Rods**



# THE ONE-2-PUNCH

## OPERATING ECONOMY ••• MAXIMUM EFFICIENCY

The one-two punch has put many a good fighter down for the count. It has made a champion out of those who have it and a bum out of those who haven't.

In the daily production battle Axelson Sucker Rods are delivering the one-two punch, — one, operating economy — two, maximum efficiency. These are the blows that strike at the very vitals of that tough old fighter Production Overhead. They are the blows that make Rod Troubles groggy and hang on the ropes.

Axelson rods are always in training. Behind their one-two punch is a series of controlled manufacturing processes which are responsible for their rod stamina and staying qualities.

Exhaustive laboratory tests have determined the analysis of Axelson rod stock manufactured in accordance with the best alloy steel mill practice. At each stage of the rod's fabrication it is checked by skilled technicians for proper tensile strength, elastic limit, and many other factors vital to the wearing quality of the rod.

Through forging, machining and heat-treating operations, the watchful eyes of Axelson engineers maintain the rods' perfect fighting condition. Thousands of operators will testify that Axelson rods never throw in the sponge.

**Axelson Manufacturing Co.**

P. O. BOX 710, VERNON STA. LOS ANGELES

Tulsa St. Louis

New York City, 30 Church St.

*Mid-Continent and Eastern Distributors*

Frick-Reid Supply Corporation

Rods are tested for ultimate strength by an Olsen tensile testing machine.

Brinnel and Rockwell hardness testers determine the grain structure.

Specimens are subjected to shock test on the Olsen-Izod.

# AXELSON SUCKER RODS

# J & L DOUBLE-LENGTH LINE PIPE

*Producing J & L Double-Length Line Pipe*

## NOW MADE WITH A NEW.. EXCLUSIVE *FLASH-WELDED* JOINT

AFTER exhaustive research, the Jones & Laughlin Steel Corporation now offers to the Oil and Gas Industry, J & L double length pipe in sizes from 1″ to 12″, inclusive, joined by a process that provides a joint of forging characteristics.

The new J & L process is an adaptation of flash welding. First, the two ends to be welded are uniformly heated by electricity. When the proper temperature has been attained, the two lengths of pipe are joined by being pressed together.

The exuded metal, coated with oxide, gathers as beads on the inside and outside of the joint. On the inner surface, sufficient metal is removed to permit drifting. On the outer surface, the oxide coating is removed, leaving a small dense pad of metal. Inspection, and a thorough hydrostatic test conclude the process.

Oxidation and decarburization, as well as strains due to unequal expansion and contraction, are virtually eliminated. Any blow holes which might tend to form are pressed out during welding.

Flash welding equipment of special design and large capacity has been installed; large orders can thus be filled promptly.

CASING DRILL PIPE · TUBING LINE PIPE · J&L PIPE · SEAMLESS · WELDED

## JONES & LAUGHLIN STEEL CORPORATION

AMERICAN IRON AND STEEL WORKS

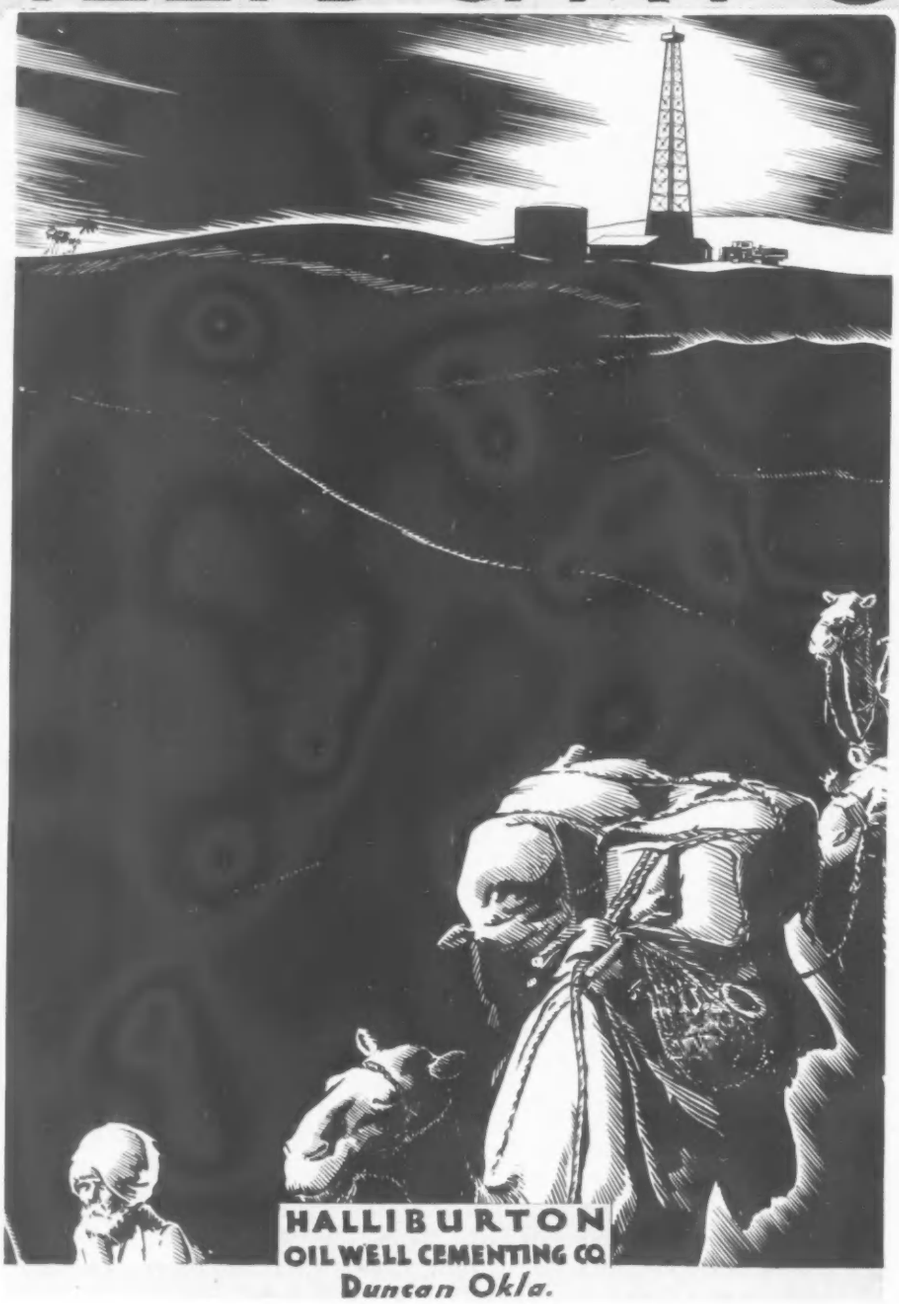
JONES & LAUGHLIN BUILDING, PITTSBURGH, PENNSYLVANIA

Manufacturers of Seamless and Welded Casing, Tubing, Drill Pipe and Line Pipe, and Welded Steam, Gas and Water Pipe in both Black and Galvanized

Also makers of Bars, Shapes and Plates, Reinforcing Bars, Cold Finished Steel, Junior Beams, Steel Piling, Fabricated Structural Work, Steel Barges, Wire Products and Tin Mill Products

J&L STEEL

# HALLIBURTON




Traveling through the oil fields of Iraq (Mesopotamia) one beholds many strange sights. Caravans of camels . . . dark skinned natives toiling in sub-tropical heat . . . incredibly large swarms of mosquitoes and sand flies doing their bit to make life miserable. Yet, in the midst of the strange surroundings, the American oil man comes upon a familiar scene. In Iraq, as in every other part of the oil world, Halliburton Cementing Equipment is diligently at work . . . "Where a company is operating so far from the base of supply, and where so much money is at stake without immediate returns, dependable equipment is very essential."

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